March 1960 75¢

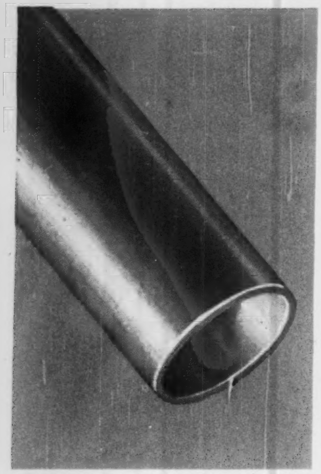
DUN'S REVIEW
AND MODERN INDUSTRY

- What presidents think of advertising
- Do business and politics mix?
- How to handle executive deadwood

Special Report to Management

INDUSTRY'S PLANT:
Big Changes Ahead

A DUN & BRADSTREET PUBLICATION



If you want more than just a tube

Imagination . . . research . . . new product pioneering and development . . . are these some of the things you look for in a supplier?

If they are . . . and if your company uses tubing, then you'll find that Wolverine Tube is exactly the kind of supplier you want.

In addition to meeting the present needs of its customers, Wolverine Tube is also working steadily toward the future. Wolverine engineers and technicians have the industry's most complete Research and Development facilities right within their own company. They are constantly delving into new types of tubing and working with new metals and alloys.

Inflatable tubing, so flat it resembles a ribbon . . . the longest length of zirconium tubing yet produced in the United States . . . tubing and shapes made from columbium, tantalum and molybdenum . . . these are but some of the new things coming from Wolverine's R&D program.

If your management is taking a long look at tomorrow . . . and beyond . . . then Wolverine Tube can help bring your plans to fulfillment . . . particularly in the field of tubing and heat transfer. Wolverine's experience, engineers and research and development facilities are ready to help solve your problems. May we hear from you soon?

Tomorrow's metals are being worked at Wolverine Tube today

CALUMET & HECLA, INC.
CALUMET DIVISION
URANIUM DIVISION
GOODMAN LUMBER DIVISION
WOLVERINE TUBE DIVISION
In Canada:
CALUMET & HECLA OF CANADA LIMITED
WOLVERINE TUBE DIVISION
CANADA VULCANIZER & EQUIPMENT CO. LTD.
UNIFIN TUBE DIVISION

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.

17214 Southfield Road
Allen Park, Michigan

Manufacturers of Quality Controlled Tubing and Extruded Aluminum Shapes

J-8426

PLANTS IN DETROIT, MICHIGAN AND DECATUR, ALABAMA. SALES OFFICES IN PRINCIPAL CITIES

DUN'S REVIEW

AND MODERN INDUSTRY

VOLUME 75 NUMBER 3

March 1960

5 *The Trend of Business*
11 *Business Men's Expectations*
13 *Business Failures*
19 *Washington Business Front* JOSEPH R. SLEVIN
23 *Voice of Industry*
37 *Editorial*

38 *What Industry's Leaders Think of Advertising* A PRESIDENTS' PANEL REPORT
41 *How to Deal with Executive Deadwood* EDWARD A. McCREARY
44 *Transportation Tomorrow: A Glimpse Ahead* JOSEPH R. MARSHALL
46 *How Premiums Pay Off Today* C. T. SLOTE
48 *The Myth of the Wicked Politician* CLARENCE B. RANDALL
50 *Executive Jobs: A Seller's Market*

A SPECIAL REPORT TO MANAGEMENT

51 *Industry's Plant: Big Changes Ahead*

133 *Managing Your Manpower* LAWRENCE STESSIN
137 *Inside Industry*
143 *Living with the Law* PAUL A. KING
147 *Capital Views & Previews* PAUL WOOTON
152 *International Markets* ALEXANDER O. STANLEY
157 *Ideas at Work*
159 *Executive Bookshelf*
160 *New Product Parade*
164 *The Reviewing Stand*

Growth funds: a most satisfactory source

Businessmen are relying more and more on COMMERCIAL CREDIT for needed funds. During 1959 COMMERCIAL CREDIT'S advances to manufacturers and wholesalers to supplement their cash working capital exceeded one and one-quarter billion dollars. There are good reasons for this.

We usually provide more money than can be obtained from other sources. We furnish it fast—usually within 3 to 5 days. We eliminate the uncertainty of periodic renewals—our arrangement continues as long as the need exists. We increase the amount of cash automatically if increased sales create the need. We minimize cost—the amount used can be varied automatically to fit changing needs.

You can arrange NOW for cash you may need any time this year—without any fixed commitment or advance expense. Whether you require $25,000 or millions—for months or years—we will welcome the opportunity to provide it. Ask the nearest COMMERCIAL CREDIT CORPORATION office below.

BALTIMORE 2 . . . . 300 St. Paul Place
CHICAGO 6 . . . . 222 W. Adams Street
LOS ANGELES 14 . . . . . . 722 S. Spring Street
NEW YORK 36 . . . . 50 W. 44th Street
SAN FRANCISCO 6 . . . . 112 Pine Street

Consult COMMERCIAL CREDIT

COMMERCIAL CREDIT COMPANY subsidiaries provide over four billion dollars of financing services annually. Capital & Surplus over $225,000,000

DUN'S REVIEW
AND MODERN INDUSTRY

Publishing Director . . . . ALEX J. DUGHI

Editor . . . . A. M. SULLIVAN
Executive Editor . . . . . . M. JOSEPH DOOHER
Managing Editor . . . . ROLAND MANN
Senior Editors:
Marketing Editor . . . . THOMAS KENNY
Industrial Editor . . . . . . MELVIN MANDELL
Executive Methods Editor . JOSEPH R. MARSHALL
Assistant Editor . . . . CHRISTINA KIRK
Art Director . . . . CLARENCE SWITZER
Production Manager . . . . EDWARD GERLACH

Contributing Editors
ALFRED G. LARKE
PAUL WOOTON
JOSEPH R. SLEVIN
LAWRENCE STESSIN
GERALD M. LOEB
PAUL A. KING
ALEXANDER O. STANLEY
EDWIN B. GEORGE
ROBERT J. LANDRY
JOHN W. RIDAY
ROWENA WYANT

Business Manager . . . . VIOLA V. ANDERSON
Circulation Manager . . . . . ROY PAKANSKY
Publishing Adviser . . . . . NORMAN C. FIRTH

DUN'S REVIEW AND MODERN INDUSTRY, March 1960, Vol. 75, No. 3. Published monthly by Dun & Bradstreet Publications Corp., J. Wilson Newman, President. Publication Office: 300 West Adams St., Chicago, Ill. Entered as second class matter at the Post Office, Chicago, Ill.

Correspondence for Editorial, Advertising, or Subscription Offices should be sent to Dun's Review and Modern Industry, 99 Church St., New York 8, N.Y.

Subscription: $5 a year in USA and Possessions, and Canada. Elsewhere, $10. Single copy, 75 cents. Please state title and employing company when subscribing.

Copyright 1960 by Dun & Bradstreet Publications Corporation. Copyrighted under International Copyright Convention. All rights reserved under Pan American Copyright Convention. The title DUN'S REVIEW AND MODERN INDUSTRY is registered in the U.S. Patent Office. This magazine is indexed in the Industrial Arts Index, in the Public Affairs Information Service, and also by volumes in an index available upon request to the Editorial Office . . . Member ABC. Printed in USA.

CREDITS: *Cover*, Dean Ellis. *Page 23, lower right*, photograph by Fabian Bachrach; *page 25*, photograph by Harris & Ewing; *page 55*, photograph by Lenscraft Photos, Inc.; *page 64*, photographs courtesy of Fulmer & Bowers, Architects; *page 72*, photograph courtesy of Ralph Stoetzel, Architect-Engineers; *page 113, bottom*, photograph courtesy of Slater Food Service Management; *page 114, center*, photograph courtesy of Welton Becket & Associates, Architects.

EDITORIAL PREVIEW

Coming DUN'S REVIEW features you won't want to miss

√ Watch Out When You Automate

Even if workers' fears of automation are groundless, you'd be foolish to ignore them when the time comes to think about putting in new, automatic equipment to step up your plant or office productivity. Here's how some companies have successfully faced up to the problem.

√ Can You Make It Cheaper Overseas?

More and more U.S. manufacturers are discovering that one way to cope with the competitive pressure of cheap imports is to go overseas themselves for some components—or even for finished products. Learn how they're going about it—and why some are running into trouble.

√ Meet Roger Blough

The latest of DUN'S REVIEW'S exclusive top-management interviews takes you behind the scenes of Big Steel to talk with the man who shaped management strategy in the big strike, get his personal thinking on labor leadership, pricing, inflation.

√ The Myth of the Production Wizard

The real weakness of one-man management is exposed in a rewarding article by business elder statesman Clarence B. Randall, the fourth of his exclusive series on the myths of management.

√ Managing Your Manpower

Top industrial relations authority Lawrence Stessin offers a keen analysis of key trends and problems in the labor-management field.

√ Sales & Distribution

An up-to-the-minute report on marketing, sales management, and distribution techniques in a wide range of industries points up some significant new trends.

√ Focus on Finance

The financial pros and cons of mergers and acquisitions and other current corporate financial problems are discussed by leading Wall Street authority Gerald M. Loeb.

SUBSCRIPTION

DUN'S REVIEW
AND MODERN INDUSTRY

ORDER FORM

CIRCULATION DEPARTMENT, 99 CHURCH ST., NEW YORK 8, N.Y.

Please enter my subscription for

☐ 3 Years for $10 ☐ 1 Year for $5

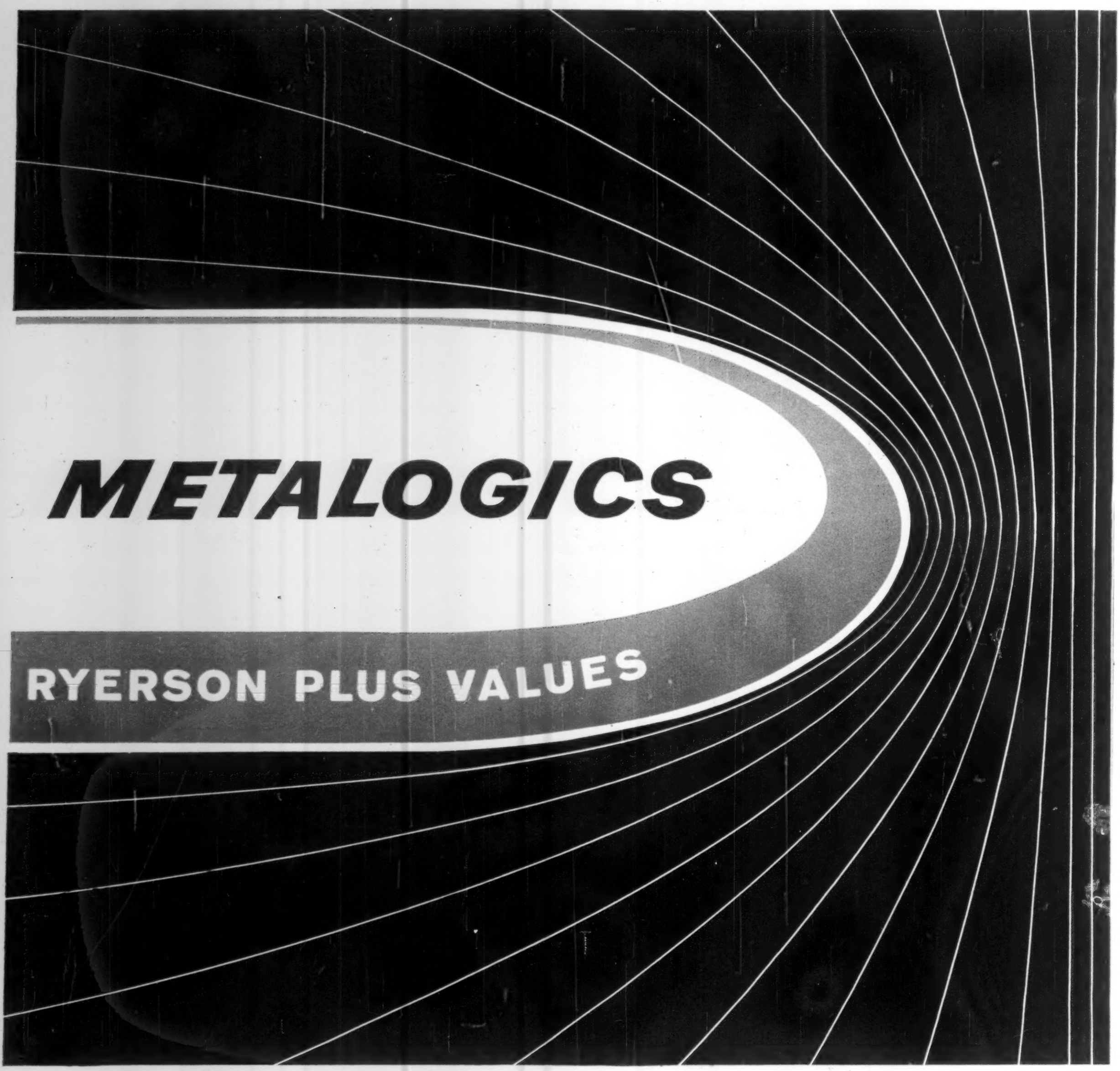
Name

Title

Company

Address DR-360

Payment enclosed ☐ Bill Company ☐ Bill me ☐



METALOGICS—The Ryerson science of giving optimum value for every purchasing dollar.

Get the complete story on Metalogics from your Ryerson representative. Be "Metalogical"—call Ryerson.

STEEL • ALUMINUM • PLASTICS • METALWORKING MACHINERY

RYERSON STEEL

Joseph T. Ryerson & Son, Inc., Member of the INLAND® Steel Family

PLANT SERVICE CENTERS: BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI • CLEVELAND • DALLAS • DETROIT • HOUSTON • INDIANAPOLIS
LOS ANGELES • MILWAUKEE • NEW YORK • PHILADELPHIA • PITTSBURGH • ST. LOUIS • SAN FRANCISCO • SEATTLE • SPOKANE • WALLINGFORD

The Trend of BUSINESS

Production: *Output to hit new peak at mid-year*

Sales: *High levels at wholesale and retail*

Inventories: *Healthy gains through second quarter*

Failures: *January toll up slightly (page 13)*

Strengthened by steady but cautious gains in inventory accumulation, more outlays for new plant and equipment, and continued high levels of consumer spending, business activity will move up to new peaks in the coming months. Although some economists and business men were concerned over a slackening in the upward movement of some business indicators in mid-Winter, it is likely that this was a breathing spell which will serve to stretch out the current period of expansion.

By mid-year, industrial production will hit its new peak and then drift along at a high level through most of the year.

Currently at 170 (1947–49=100), the new Federal Reserve Board's index of industrial production will stand somewhere close to 180 at the end of the first half of this year. Contributing to this will be steady gains in the output of machinery, lumber, paperboard, textiles, and food and continued high production levels in furniture, appliances, oil, and electric power. Over-all production will gain less support from the output of steel and automobiles in the second quarter, as losses incurred by the steel strike are made up.

As new orders slacken in the coming months, steel mills will begin to reduce production levels.

The post-strike upsurge in new orders for steel has shown signs of subsiding somewhat in recent weeks, and further declines are most probable through the spring. Some of the steel that has been produced since the strike has been added to consumers' inventories, and many steel customers no longer fear shortages. Also, they do not foresee any immediate price increases on steel products as a result of the wage settlement.

Although this will mean a decline in steel production from the better than 90 per cent operating levels of the first two months of 1960, the dip will be moderate.

Many foreign producers are reducing their prices below those that prevailed during the strike in this country, making a further gain in steel imports and a decrease in exports likely.

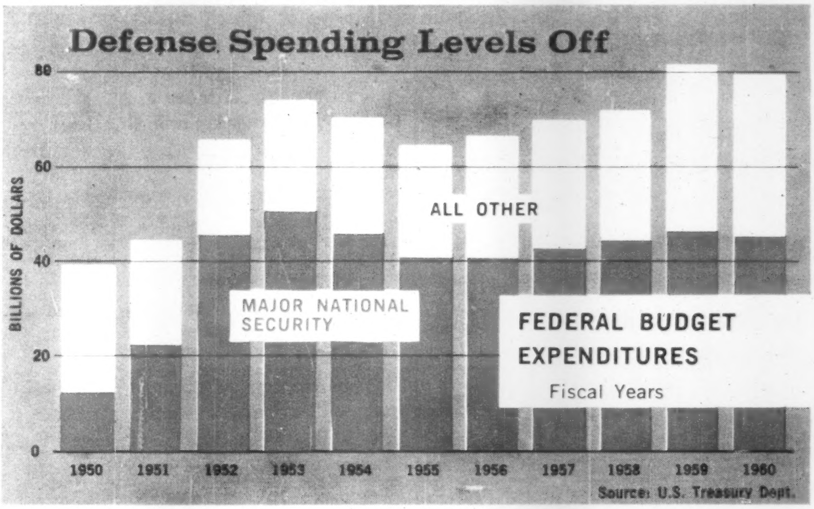
Further reductions in output schedules of autos seem in the cards unless sales bounce up to the high levels predicted earlier.

Although auto sales early this year were up substantially from a year ago and were at relatively high levels, it was felt within the industry that they did not indicate 1960 would be a 7 million auto year as was previously predicted. As a result, output schedules for February and March were reduced 10 to 15 per cent from what was originally planned. If the rate of increase in sales continues to be disappointing and the spring upsurge fails to satisfy makers, output plans through mid-year may be revised downward.

Sales so far this year point to a 6.5 to 6.7 million auto year, which would be the second highest in history. So far, the new compact models have accounted for about 25 per cent of the 1960 model run.

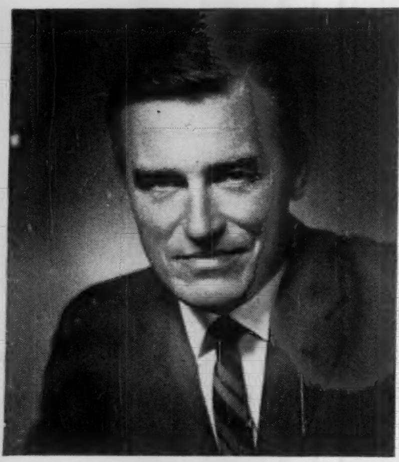
Expansion in industrial output through mid-year will mean record profit levels for the first half.

Although a leveling off in industrial activity in the second half will



Source: U.S. Treasury Dept.

A FRACTIONAL DECLINE *in Federal outlays for major national security is expected for the fiscal year ended June 30, 1960, and little change is planned for fiscal 1961.*

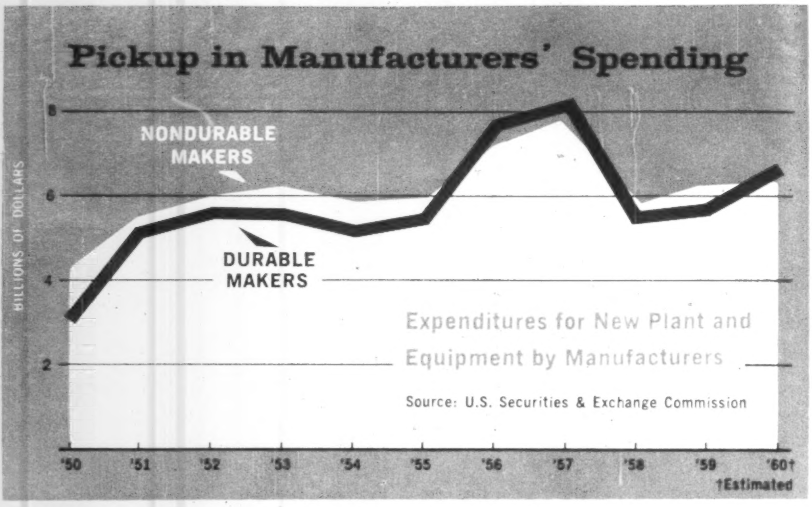


What's
your
corporate
image?

The modern corporate executive, with the best interests of his firm in mind, always has a recent portrait on hand for use in modern communications media.

May we suggest that you take advantage of the facilities offered by your local portrait studio and arrange for a sitting soon. You will find it a benefit to both yourself and your company. Ansco, Binghamton, N. Y., A Division of General Aniline & Film Corporation.

Ansco
Photographic Materials



Pickup in Manufacturers' Spending

Expenditures for New Plant and Equipment by Manufacturers

Source: U.S. Securities & Exchange Commission

†Estimated

NEW PLANT AND EQUIPMENT OUTLAYS *by makers of durables in 1960 are likely to rise faster than those of makers of non-durables. Source: U.S. Sec. and Exch. Comm.*

result in moderately lower corporate profits later in the year, a moderate gain for the year as a whole is in prospect.

As in 1959, retained earnings will be at extremely high levels. This, along with the basic need for expansion of facilities to accommodate long-range projections of increased output, will stimulate outlays for new plant and equipment through the end of the year. Such outlays are likely to amount to about $35.5 billion in 1960, second only to the total expenditures in 1957. The proportion of these expenditures allotted for equipment that would cut operating costs and aid efficiency will be somewhat greater this year than it was in 1957.

Since the first of the year, machinery makers have reported marked increases in new orders, especially for machinery that would equip new plants. In addition, machine tool orders picked up following the declines that prevailed toward the end of 1959. Continued gains in plant and equipment outlays will assure further increases in activity in these industries.

Higher production levels will lead to monthly records in the number of jobholders.

The number of unemployed, however, will not show much of a change and will stay around 5 per cent of the labor force. In the 1955–57 period of business expansion, the jobless comprised about 4 per cent of the labor force.

The rise in industrial production in the months ahead will stem from inventory accumulation. Although gains will be substantial, business men will continue to be conservative in adding to their holdings. Gains will not match those of the first half of 1959 and will be somewhat less than was anticipated late last year, especially in steel products, autos, and appliances. However, low stock-sales ratios, or the relation of inventories to sales, still persist, indicating that healthy gains at all three levels—manufacturing, wholesale and retail—are likely through the second quarter. After that, when business men feel that their holdings are adequate, inventory accumulation will level off and there may even be signs of liquidation.

Contributing to inventory build-up in the months ahead will be high sales levels at wholesale and retail.

Reports of recent weeks show that wholesale volume was up moderately from year-earlier levels. Although gains in orders for appliances and furniture were below the hopes of many markets, volume in spring apparel and textiles was better than expected. Moderate year-to-year gains in most lines are likely.

The somewhat disappointing wholesale volume in appliances was due to a not too enthusiastic consumer response to sales promotions on laundry equipment, refrigerators, and television sets. Dealers, however, reported appreciable increases from a

You Owe It to Your Overhead
to see this

ALL-NEW

Copease Champion

Copease
Duplex

efficiency inside • New styling outside • New performance, too!

The Copease Champion's exclusive Posi-Contact exposing process gives finer copies than ever before possible on any comparable machine. You're assured good copies of even the most difficult originals. And now there's no dial adjustment for 96% of all copying. Paper waste practically disappears because guesswork is eliminated.

The result? You get unbeatable operating economy. Tests by America's leading corporations prove conclusively that the new Copease Champion produces high quality copies more economically than any comparable machine.

SEND NOW FOR COMPLETE INFORMATION (*Attention Duplicating Departments:* Send for news about the new Copease-Banda Spirit Duplicators and Copease Copilith Offset Presses.)

COPEASE CORPORATION, Dept. DR-3
425 Park Ave., New York 22, N. Y.
Send full information on: ☐ The new Champion; ☐ The Copease-Bandas;
☐ The Copease Copiliths.
☐ I want a *free* 3-day trial of the new Champion.

NAME________________________________

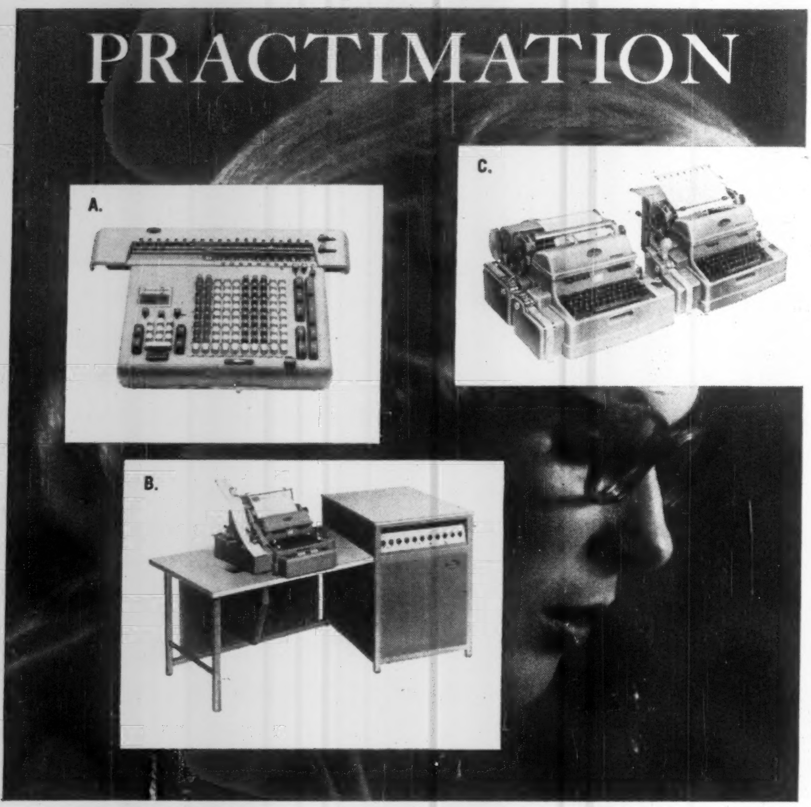
FIRM________________________________

STREET______________________________

CITY________________COUNTY________STATE______

"Copease Copies Everything"

COPEASE CORPORATION
425 Park Avenue, New York 22, N.Y.



A new word, which means more than automation, for it is the custom-fitted application of today's finest automation equipment to your particular needs...

This announcement is a culmination of Friden's years in integrated data processing. Friden's assumption of responsibility for the most important phase of automation—its practical application.

The first step to PractiMation is a critical analysis of your office. Second, an outline of objectives for increasing its efficiency (without personnel changes). Then, consult your Friden man. He is an expert, and has solved a good many problems like yours. His help can be invaluable.

Next, you need equipment that can be used by your present employees without special training; equipment which is sanely priced, easy to install. And, above all, equipment which is expandable with your business.

Here are some good examples:

A. Friden SBT Calculator—the famous "Thinking Machine of American Business." Touch-one-key simplicity. Performs more steps in figure-work without operator decisions than any other calculating machine ever developed.

B. Friden COMPUTYPER® (Model CTS)—writes and figures a complete invoice in one operation with virtually no operator intervention. Reads alphabetical or numerical data from punched tape, edge-punched cards or tabulating cards; data not pre-punched is entered through the typewriter keyboard. The Computyper CTS and any good typist make up an entire billing department.

C. Friden JUSTOWRITER®—makes any typist a skilled type compositor. Automatically provides professional-looking composition for offset reproduction.

These are just three. Friden's full line of adding machines, calculators, accounting machines, mail room equipment, and "Tape Talk" IDP equipment can fully automate your office. Call your Friden man today, or write directly to Friden, Inc.

© 1960 FRIDEN, INC.

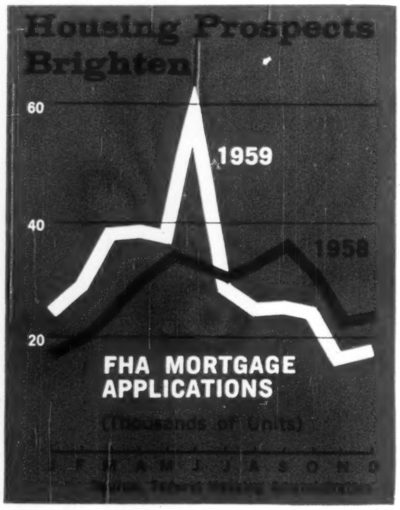
Friden Creates A New World For Business®

Friden *has the system*

FRIDEN, INC. SAN LEANDRO, CALIFORNIA • SALES, INSTRUCTION, SERVICE, THROUGHOUT THE FREE WORLD.

year ago, and comparable gains are likely through the first half.

Consumer buying of apparel so far this year has pleased most retailers, and a late Easter this year has led to predictions of noticeable gains over the 1959 Easter selling season in sales of both men's and women's spring merchandise. The first six months of 1960 are likely to show an increase of about 6 per cent in over-all retail trade over the similar 1959 period, with gains in household goods a little more substantial than in other lines.



A SLIGHT RISE *in FHA mortgage applications has recently indicated that housing in 1960 may be better than previously expected.*

The rate of increase in consumers' instalment debt will accelerate as auto sales pick up.

Although buying on time may become more expensive for the consumer and discourage some instalment purchases, increases in consumer credit outstanding will be more noticeable in the months ahead, with higher consumer interest in autos and big-ticket appliances. During the second half of the year, the pace of instalment buying will subside, as will over-all consumer buying as shoppers become somewhat aware of a leveling out in business activity and are faced with minor price increases.

The price stability of the past few months will be maintained until late in the year, when fractional increases are probable. Although one major stimulant to inflation, Federal budget deficit financing through commercial banks, now seems unlikely, prices will feel the effect of high levels of consumer and business expenditures. Also, some steel companies may raise their prices to cover wage increases provided for in the January settlement. This could result in price hikes in some durable consumer and industrial lines. Competition both at home and abroad will force steel companies to keep price increases at a minimum.

Despite the recent recovery in housing starts, the leveling out begun last fall will be resumed as building costs remain high and mortgage money stays tight. But even with a dip of about 10 per cent from last year, the number of new housing starts in 1960 will be at a relatively high level, somewhere around 1.2 million.

The slackening in residential construction and declines in public outlays will hold over-all construction in 1960 close to 1959 levels.

These declines will be offset by substantial gains in industrial building resulting from the higher spending on new plants. There will also be marked advances this year in office buildings, stores, and garages.

Although some business men and economists fear that an inadequate money supply and general tight-money conditions will restrain business spending on new plant and equipment this year, the effects most probably will be minor. Record retained earnings and high depreciation allowances will allow most companies to draw on internally generated funds for financing of this sort. Also, having added a sizable amount to their holdings of Government obligations last year, they are less dependent on borrowing to finance their cash requirements.

Except for some short-lived rallies, trading on the New York Stock Exchange remained sluggish in mid-February, and price levels showed little change from those of January, which were the lowest since last April. Some observers attributed this to disappointment over the upward movement of some economic indicators and to inflation fears, but most offered little or no explanation for the behavior of the stock market. END

This report was prepared in the Business Economics Department, Dun & Bradstreet, Inc., by John W. Riday.

Mailing scale let you down?

Old-fashioned scales are like old chickens—they get tough or tired. The tough scale underweighs, *and your letters arrive "Postage Due"—annoying your correspondents, and earning ill will for you.*

The tired scale overweighs, *and wastes postage. At 4¢ first class, and 7¢ airmail, a few extra stamps a day can run into a sizeable loss in a year.*

Either way, you can't afford a scale that isn't accurate.

Get a precision Pitney-Bowes Mailing Scale. No springs—but an automatic pendulum mechanism that holds its accuracy year after year. The hairline indicator registers instantly and exactly—doesn't waver. The large chart markings and big figures are easy to read, make weighing faster, easier. Avoid errors, save postage.

Seven models to choose from, including an international rate scale and a 70 lb. capacity scale for parcel post. Ask the nearest Pitney-Bowes office to show you. Or send coupon for free illustrated booklet.

FREE: *Handy desk or wall chart of postal rates, with parcel post map and zone finder.*

PITNEY-BOWES
Mailing Scales

Pitney-Bowes, Inc.
1581 Walnut St., Stamford, Conn.
Originator of the postage meter . . . offices in 122 cities in U.S. and Canada.

Pitney-Bowes, Inc.
1581 Walnut Street
Stamford, Conn.

Send free booklet ☐ *rate chart* ☐

*Name*____________________

*Address*____________________

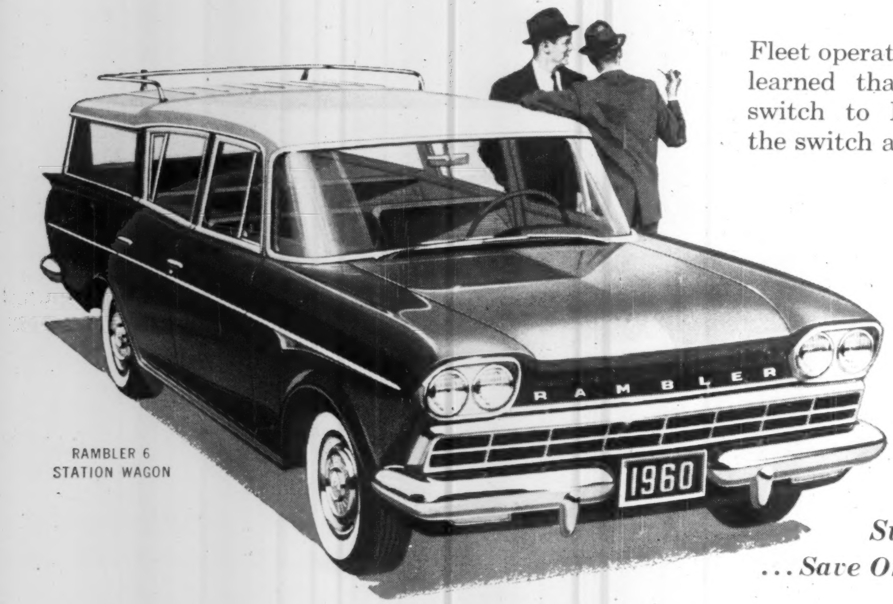
A Sound Business Tip:

SWITCH TO RAMBLER

—Save On Your Fleet Costs!

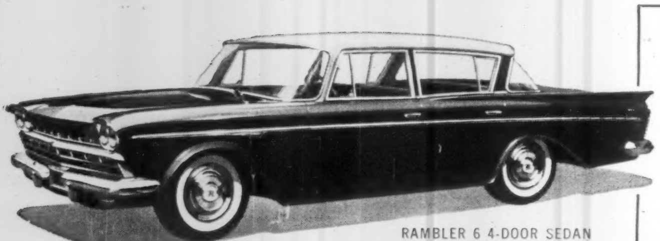
Fleet operators from coast-to-coast have learned that it is sound business to switch to Rambler. The reasons for the switch are obvious:

1. **Rambler costs less to buy . . . reduces your fleet investment!**
2. **Rambler costs less to operate . . . is the recognized economy leader, proved by 25 billion owner-driven miles . . . saves on fleet operating costs.**
3. **Rambler has the top resale value of all low-priced cars . . . brings you more when it comes time to trade or sell.**



RAMBLER 6
STATION WAGON

Switch to Rambler NOW!
. . . Save On Fleet Operating Costs!



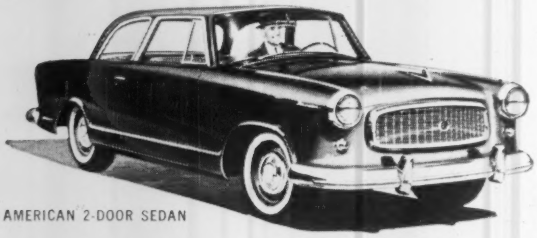
RAMBLER 6 4-DOOR SEDAN

FLEET LEASING ARRANGEMENTS AVAILABLE

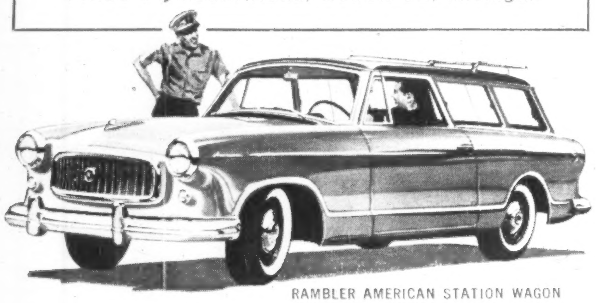
If your firm leases fleet units, ask your leasing company for low Rambler rates or write us for the names of leasing companies with whom we have working arrangements for your convenience.

Write or Wire . . .

FLEET SALES DEPARTMENT
DEPT. E-3
AMERICAN MOTORS CORP.
14250 Plymouth Road, Detroit 32, Michigan



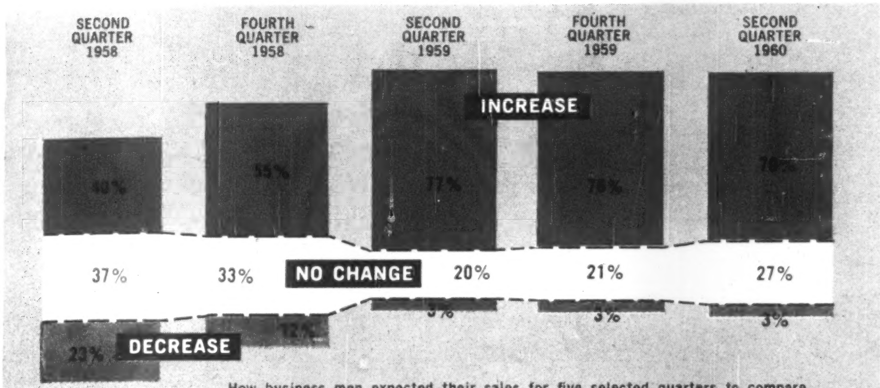
RAMBLER AMERICAN 2-DOOR SEDAN



RAMBLER AMERICAN STATION WAGON

America's Most Experienced Builder of Compact Cars!

Business Foresees Good Second Quarter



Sales: How business men expected their sales for five selected quarters to compare with actual year earlier levels. Opinions were gathered three or four months before the start of each quarter.

EXECUTIVES interviewed in the latest DUN & BRADSTREET survey of business men's expectations anticipated year-to-year gains in their sales and profits during the second quarter. With uncertainties about the outcome of the steel strike out of the way, 70 per cent of the respondents were looking forward to better second-quarter sales than last year's, and only 3 per cent foresaw a dip below last year's level. The rest expected no change.

However, most of the business men in the current poll were less optimistic than they were in a similar survey a year ago, when their predictions were made in comparison with the recession-tainted second quarter of 1958.

Most optimistic about sales in the coming quarter were makers of nondurables. As in a similar survey a year ago, durable goods manufacturers saw the brightest, and wholesalers the gloomiest, profit picture. In the current survey, wholesalers were likewise least cheerful about second-quarter sales prospects.

In general, business men were less bullish about profits than about sales in the coming quarter, but even so they were showing more optimism than three months earlier. Of all those interviewed, 53 per cent foresaw higher profit levels, as against 51 per cent three months back.

Manufacturers were a bit more optimistic about new orders than they were in the previous survey. Among durable goods producers, 67 per cent expected gains in new orders, compared with 59 per cent three months earlier. Sixty per cent of the nondurable makers foresaw their new orders climbing—a gain of 3 per cent since the preceding poll.

A good majority, or 63 per cent, of all those interviewed expected their inventory levels to be the same as a year earlier. The highest percentage anticipating inventory increases was found among manufacturers of durables, but even there the "no changes" far outdistanced the "ups."

In their price projections, 31 per cent of the executives were on the up side, 2 per cent on the down side, and 67 per cent foresaw no change. The proportion of those expecting to raise prices was a little bigger than it had been three months earlier. In the new poll, the percentage anticipating increases was highest among wholesalers (39 per cent) and lowest among retailers (24 per cent).

Second-Quarter Outlook

COMPARED WITH YEAR-EARLIER OPINIONS

Per cent in 1959				Per cent in 1960		
Up	Same	Down		Up	Same	Down
			ALL CONCERNS			
77	20	3	Sales	70	27	3
58	38	4	Profits	53	44	3
27	70	3	Prices	31	67	2
33	57	10	Inventories	28	63	9
17	78	5	Employment	15	82	3
			MANUFACTURERS			
76	20	4	Sales	72	25	3
60	35	5	Profits	56	41	3
23	74	3	Prices	27	71	2
36	54	10	Inventories	29	63	8
24	71	5	Employment	21	77	2
67	29	4	New Orders	64	34	2
			WHOLESALERS			
78	20	2	Sales	65	31	4
54	42	4	Profits	48	48	4
35	62	3	Prices	39	59	2
30	62	8	Inventories	27	65	8
11	86	3	Employment	8	89	3
			RETAILERS			
77	20	3	Sales	71	26	3
55	41	4	Profits	55	42	3
27	71	2	Prices	24	73	3
27	58	15	Inventories	29	60	11
10	84	6	Employment	12	85	3

Eighty-two per cent of all those interviewed expected present high employment levels to continue in the second quarter. As in the previous poll, companies expecting higher employment were most numerous (27 per cent) among manufacturers of durables. Only 8 per cent of the wholesalers expected to add to their payrolls; 89 per cent foresaw no changes from the second quarter of 1959.

In interpreting the results of this survey, it should be remembered that the answers are not a forecast but an indication of the views held by a representative group of business men when questioned in late January.

—JOHN W. RIDAY
Business Economics Department

TIME TO DECIDE

“Should I pay a premium for ownership of trucks or should I pay for use only?”

Ryder full service truck leasing lets you pay for use only—*not* costly ownership. The money and the time you expend in owning and maintaining a fleet is immediately freed for more profitable tasks. The same holds true for your car fleet and materials handling equipment (see column opposite this page). And you'll enjoy something else:

RYDER'S EXCLUSIVE PACKAGE OF LEASING EXTRAS:

1) Complete service through the *largest number of wholly owned service locations* in the business. No matter where you send your trucks, service is always available. 2) Your fleet is specially designed by experts to meet your needs, give you top efficiency. 3) Nationwide safety program to reduce accidents, improve customer and public relations. 4) Complete leasing package. Lets you include car fleet, materials handling equipment, even business equipment. You pay one easy-to-budget weekly bill, and all automotive equipment receives full service.

Decide now to see your nearby Ryderman, or write for our booklet, "Design for Profit" to:

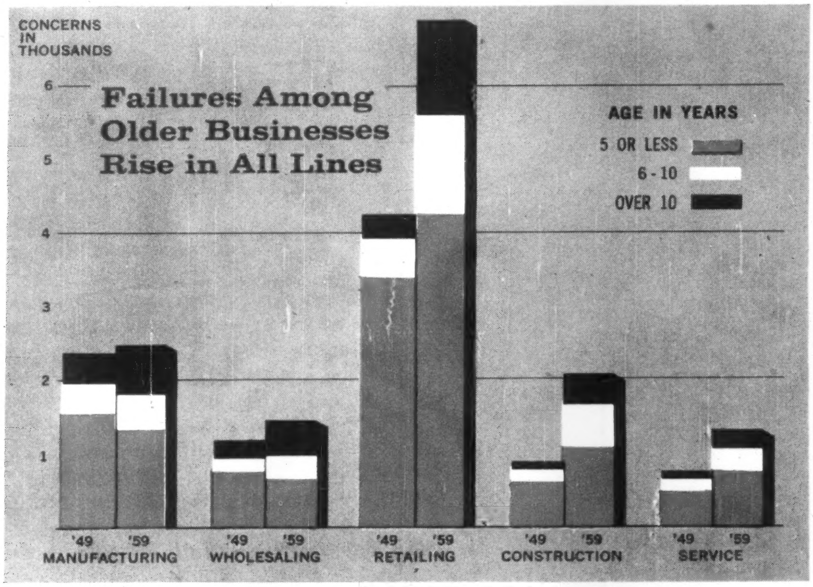
RYDER TRUCK RENTAL

LEASING
DIVISION OF
RYDER
SYSTEM, INC.
P.O. Box 33-816, Dept.
Miami, Florida

Ryder System also operates truck lines in 26 Eastern and Southern states

Business Failures

Mild seasonal rise in casualties
Lack of know-how leads causes of failure



BUSINESS failures, edging up 9 per cent in January, stood at 1,181, the most since June of last year. However, the rise was milder than the usual seasonal upturn, and the toll was the smallest for any January in the past three years.

Casualties occurred at a rate of 51.0 per 10,000 enterprises listed in the DUN & BRADSTREET *Reference Book*. Although this rate rose slightly from December, it was fractionally below the 51.1 set a year ago.

Concerns failing in January had liabilities of $53.7 million, a volume 10 per cent smaller than in December but 27 per cent short of the $73.6 million recorded in the previous January.

Among retailers and construction contractors, tolls climbed noticeably between December and January. The retailing rise was concentrated in apparel, where casualties were half again as numerous, and in furniture, where casualties almost doubled their month-earlier level. In construction, the January upturn was general, prevailing in general building, subcontracting, and heavy construction industries.

continued on page 15

WHY BUSINESSES FAIL: Year ended December 31, 1959

APPARENT CAUSES	MFG. %	WHOL %	RET. %	CONST. %	COMM. SERV. %	TOTAL %
NEGLECT	2.7	3.4	3.6	2.8	2.8	3.2
FRAUD	1.2	4.4	1.5	1.6	1.3	1.7
INEXPERIENCE, INCOMPETENCE	92.8	90.0	91.1	91.9	91.2	91.4
Inadequate sales	57.2	49.7	50.8	39.6	52.4	50.3
Heavy operating expenses	5.6	4.8	3.3	8.3	4.8	4.7
Receivables difficulties	12.5	16.1	5.5	14.9	5.1	9.1
Inventory difficulties	4.7	8.9	9.0	1.7	2.0	6.5
Excessive fixed assets	9.0	1.6	4.1	3.9	10.7	5.3
Poor location	0.4	0.9	4.5	0.5	2.5	2.7
Competitive weakness	17.2	22.4	26.4	30.7	24.1	24.8
Other	4.7	4.8	3.9	7.7	2.8	4.6
DISASTER	1.3	1.7	1.4	0.5	1.1	1.3
REASON UNKNOWN	2.0	0.5	2.4	3.2	3.6	2.4
TOTAL NUMBER OF FAILURES	2,465	1,387	6,873	2,064	1,264	14,053

Compiled by DUN & BRADSTREET, INC. Classification based on opinions of creditors and information in credit reports. Since some failures are attributed to a combination of causes, percentages do not add up to 100 per cent.

WITH RYDER YOU CAN ALSO LEASE...

CAR FLEETS

MATERIALS HANDLING EQUIPMENT

and enjoy . . .

- The same full service through the largest number of wholly-owned service locations.
- Use of equipment specially designed for your needs.
- The benefits of having cash for this equipment available for more important jobs.
- One easy-to-budget weekly bill from a single company.

Decide now to discuss car fleet and materials handling equipment leasing as well as truck leasing with your nearby Ryderman.

RYDER TRUCK RENTAL

Electro-Knit Fabrics, Inc.

Eisen-Bilt

TURNER MFG. CO.

Mur-Mill
CHAIRS FOR EVERYBODY

Patcraft MILLS, INC.

ROSENSTEIN BROS.

Exeter
HOSIERY MILLS

EAGLE SHIRTMAKERS

CROWN KNITTING MILLS

de Loux, Inc.

Kuehne Furniture
for
SMART MODERN DINING

H.C.
Godman company

SCHNEIDER SILK MILLS, INC.

STRONG HEWAT

Footlets
Trade Mark
HOSIERY

IRVING SCHWARTZ TEXTILES, INC.

STRAUS KNITTING MILLS, INC.
Spin-Knit ... DESIGNED BY THE HOUSE OF STRAUS

STERLING HOUSE
Early American
FURNITURE
SOLID MAPLE SOLID CHERRY

Silvestri

VELCRO®

STERLING COTTON MILLS, INC.

Precision Prints
STYLED BY MILTON C. BLUM, INC.

Aldon Spinning Mills

WELLCO SHOE CORPORATION

EPHRATA SHOES
THE FINEST
WELTS & PRE WELTS

Rheeflex
ELASTIC THREAD®

McCOY-COUCH
"the REAL McCOY"
Quality Bedroom Furniture · Popular Priced
FURNITURE MFG. CO.®

Trylon FABRICS CORP.

Elmira Knitting Mills

Rich Guild Shirt Company

Fine Firms Factor

WITH

William **ISELIN** & Co., Inc.

SOME OF THE INDUSTRIES WHICH ISELIN SERVES:

Aluminum Products • Apparel
Carpets • Converters • Cordage
Cotton Fabrics • Drapery Fabrics
Elastic Fabrics • Farm Equipment
Furniture • Gloves • Hardware
Hats • Hosiery • Housewares
Knit Goods • Luggage • Paints
Paper • Plastics • Rayon Fabrics
Rubber Goods • Shoes
Sleep Products • Sporting Goods
Sportswear • Tailored Clothing
Textile Importers • Underwear
Upholstery Fabrics • Weather-wear
Woolen Fabrics • Work Clothing
Worsted Fabrics • Yarns

WILLIAM ISELIN & CO., INC.
Factors • Founded 1808
357 PARK AVENUE SOUTH
NEW YORK 10, N.Y.

Failures among manufacturers and wholesalers, on the other hand, fell off in the first month of 1960. In fact, the wholesaling toll dropped to a seven-month low, with the downturn largely in machinery.

In all types of business except construction, mortality dipped below January 1959 levels. Wholesaling casualties dropped most sharply from a year ago, down 26 per cent. Casualties ran lower in all lines except dry goods. The over-all decline in retailing amounted to 9 per cent, but considerably stronger downturns occurred in the food, general merchandise, and building materials trades.

On the other hand, the toll among furniture stores equalled the previous January's, and the tolls in the restaurant and automotive groups climbed above last year's level. Most manufacturing industries had fewer failures, but increases in food and iron and steel nearly offset the dips.

Geographically, casualties exceeded those in the preceding month in all regions except the West South Central, Mountain, and Pacific States. The Middle Atlantic toll was the highest in nine months, while the Pacific toll dipped the lowest in eleven months. In seven out of nine regions, lighter business mortality was reported than in January a year ago. Noticeably fewer concerns succumbed than last year in Florida, New York, Michigan, and Louisiana. And the large cities

THE FAILURE RECORD

	Jan. 1960	Dec. 1959	Jan. 1959	% Chg. †
DUN'S FAILURE INDEX*				
Unadjusted	52.5	46.1	52.6	– 0.2
Adjusted, seasonally	51.0	49.6	51.1	– 0.2
NUMBER OF FAILURES	1181	1080	1273	– 7
NUMBER BY SIZE OF DEBT				
Under $5,000	151	123	172	–12
$5,000-$25,000	508	493	629	–19
$25,000-$100,000	396	329	335	+18
Over $100,000	126	135	137	– 8
NUMBER BY INDUSTRY GROUPS				
Manufacturing	210	231	215	– 2
Wholesale trade	98	119	132	–26
Retail trade	587	478	642	– 9
Construction	193	163	188	+ 3
Commercial service	93	89	96	– 3
LIABILITIES (*in thousands*)				
CURRENT	$53671	$59556	$73564	–27
TOTAL	55005	60054	73564	–25

*Apparent annual failures per 10,000 enterprises listed in the DUN & BRADSTREET *Reference Book*.

†Percent change, January 1960 from January 1959.

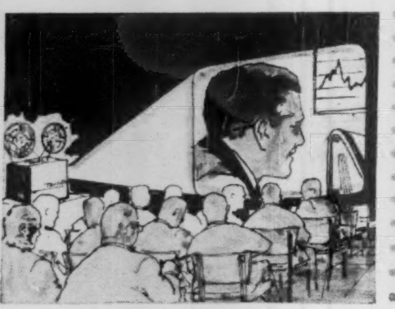
In this record, a "failure" occurs when a concern is involved in a court proceeding or in a voluntary action likely to end in a loss to creditors. "Current liabilities" here include obligations held by banks, officers, affiliated and supply companies, or the governments; they do not include long-term publicly held obligations.

WHY FINE FIRMS FACTOR WITH

William ISELIN *& Co., Inc.*

Manufacturers who factor with William Iselin & Co., Inc., are the masters of their own financial destiny. Out of their own sales they generate the working capital they need when they need it. They don't have to hunt around for loans or investors. With the funds they already have, they can support bigger volume, even give dating, and still operate on a discount-pay basis that frequently can defray most or even all of the cost of our services. Our clients also can look to us for longer-term financing for plant expansion, machinery purchases, and other special needs.

WILLIAM ISELIN & CO., INC.
Factors • Founded 1808
357 PARK AVENUE SOUTH
NEW YORK 10, N. Y.



?

WHICH—with your 16mm Selling Films—will bring back MORE DOLLARS?

Many business motion pictures were made for use with theatre-type projectors only.

Their purpose was to entertain and to establish a product-preference—*rather than to close sales on the spot.*

For daytime showings in offices, salesmen and prospects alike tend to resist darkened rooms, also the time-wasting conventional mechanics of setting up for motion picture projection. The trend is to TSI TV-Screen-Type Projectors.

TSI TV-Screen-Type Projectors can be used on the prospect's desk in daylight—or if you wish, in darkened room to a screen.

Whether a product or service gets sold is, in the last analysis, up to a salesman. With a TSI projector, he is equipped for *any type showing*—ideally for one-man solicitations and small groups in office or home.

TSI's repeater-magazine Movie-Matic just plugs in and flips on. It brings to sales forces a new concept in potentials—and most important, *plus earnings.* There have been sales increases as high as 400%. Let us tell you about them.

TSI's line of sound projectors is the most extensive available.

tsi

TELL • SELL • INSTRUCT

Technical Service, Inc.
308-50 Five Mile Road, Livonia, Mich.

☐ Send literature on TV-Screen Type projectors
☐ Send info on successful selling programs with TSI's TV-screen models
☐ Send details of TSI's projector leasing plan

NAME__________
TITLE__________
COMPANY__________
ADDRESS__________

or phone Sales Dept. KEnwood 3-8800, Detroit

60-2

experienced greater declines from comparable 1959 levels than nonmetropolitan districts.

The compilation of causes of failure in 1959 shows little year-to-year change in the underlying reasons for the casualties. Inexperience and inadequate business know-how continued to account for some 90 per cent of the failures. However, the ways in which these lacks were manifested did shift markedly in the year just ended. Whereas receivables, sales, and inventory problems had bulked larger during the 1958 recession, these factors played a lighter role among businesses failing in 1959.

Competitive weakness, however, appeared to be growing in importance. This difficulty accounted for 25 per cent of the casualties in 1959, as against 18 per cent in 1954 and only 8 per cent in 1949. Its impact was strongest in retailing and in construction, where underbidding was noted frequently.

FAILURES BY DIVISION OF INDUSTRY

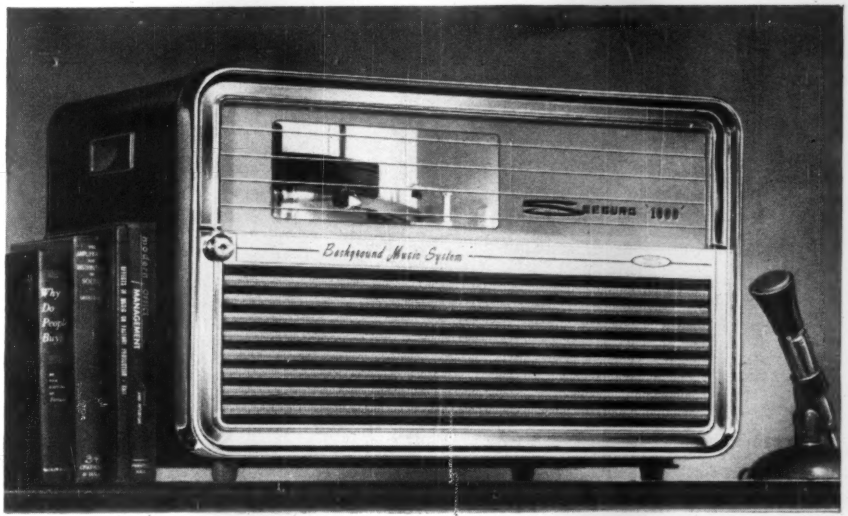
	Cumulative total (January)		Liabilities in million $	
	1960	1959	1960	1959
MINING, MANUFACTURING	210	215	16.3	17.1
Mining—coal, oil, misc.	10	3	2.2	.8
Food and kindred products	22	13	1.2	.6
Textile products, apparel	34	43	2.8	1.8
Lumber, lumber products	33	40	1.3	1.8
Paper, printing, publishing	13	16	.6	.7
Chemicals, allied products	8	5	.9	.6
Leather, leather products	8	8	1.1	.8
Stone, clay, glass products	—	8	—	1.4
Iron, steel products	19	9	1.7	.5
Machinery	17	21	1.1	3.2
Transportation equipment	10	10	.8	.9
Miscellaneous	36	39	2.7	4.0
WHOLESALE TRADE	98	132	6.3	8.5
Food and farm products	21	25	1.5	1.6
Apparel	2	4	.1	.1
Drygoods	6	2	.2	.0
Lumber, bldg. mats., hdwre	12	17	.6	1.7
Chemicals and drugs	1	2	.0	.0
Motor vehicles, equipment	9	11	.3	.5
Miscellaneous	47	71	3.6	4.5
RETAIL TRADE	587	642	16.0	33.2
Food and liquor	67	104	1.2	6.3
General merchandise	17	41	.7	1.2
Apparel and accessories	90	115	2.3	11.3
Furniture, furnishings	90	90	3.0	3.9
Lumber, bldg. mats., hdwre	25	41	.9	1.2
Automotive group	97	69	2.7	1.7
Eating, drinking places	112	106	3.1	5.9
Drug stores	10	11	.3	.2
Miscellaneous	79	65	1.6	1.4
CONSTRUCTION	193	188	12.0	8.3
General bldg. contractors	70	60	4.6	3.6
Building subcontractors	106	114	6.1	3.4
Other contractors	17	14	1.4	1.3
COMMERCIAL SERVICE	93	96	3.1	6.6
TOTAL UNITED STATES	1,181	1,273	53.7	73.6

Liabilities are rounded to the nearest million; they do not necessarily add up to totals.

This report was prepared in the Business Economics Department by Rowena Wyant.

REVOLUTIONARY in every respect

- 1000 selections on only 25 records
- Almost 40 hours of music without repeating a selection
- 100% automatic operation
- Self-contained (no central studio)
- Paging and public address
- Lightweight and compact



Background music that fits your business to a "T" ...the New Seeburg '1000'

The Seeburg "1000" Background Music System fits *every* business to a "T." For small stores and shops just plug it in . . . for larger installations play it through existing sound systems.

The music libraries—arranged, programmed and recorded by Seeburg—are *custom-tailored.* Now, for the first time, you can have tailored music scientifically created for your *particular kind* of business.

If you are about to have music for the first time, here is the perfect answer. Or if you have music now, learn what a great improvement Seeburg offers over any existing music service.

THE SEEBURG '1000'
Tailored BACKGROUND MUSIC

WE OFFER YOU A TWO-WEEK FREE TRIAL WITHOUT OBLIGATION
MAIL THE COUPON

The Seeburg Corporation, Dept. DR
1500 N. Dayton St., Chicago, 22, Ill.

We are interested in a two-week free trial of the Seeburg Background Music System.

Name of Business..
Address..
City.............................. Zone..... State.............
Signed.............................. Title..................

Lowest-priced full-size wagon!* That's the Ford Ranch Wagon. And Ford wagons carry the biggest "payload" in the low-price field. Naturally, this happy combination of size and savings makes Ford the big wagon choice for business!

Costs hundreds less than most "stripped down" models of medium-priced cars . . . yet the Ford Galaxie takes a back seat in luxury and styling to *no* other car at *any* price! It's America's favorite fine car and a great "company image" booster.

The BIG economy choice for business!

$142 less than last year! Here's the true Value Leader in the low-price field. The Ford Fairlane 500 Town Sedan is bigger and roomier than last year (up to four inches more shoulder room, for example) yet costs *less!* Of course, Ford's *new* Falcon is priced even *lower!*

You'll find Ford Fleet cars look just as good on paper as they do on the road. That's why so many cost-conscious Fleet buyers are *choosing* Ford for 1960!

For example, the new Ford Fairlane 500 Town Sedan is a far bigger value than last year. Yet, costs $142 less!* And other Ford models bring you important savings, too.

Save every mile! In the kind of driving your fleet will do, *any* Ford for '60 can help you save on day-to-day expenses. Most new Fords (V-8's included) use *regular* fuel, squeeze more mileage out of every drop! Save up to $1.00 on every tankful. Ford's Full-Flow oil filter, standard at no extra cost, means a cleaner-running engine, less maintenance required, and oil changes only every 4,000 miles. Aluminized mufflers normally last *twice* as long as the ordinary kind. And Ford's brilliant Diamond Lustre Finish keeps its beauty (which protects your investment) without *ever* needing waxing!

Built-for-business comfort is a Ford feature that's evident the moment you open the door and step inside. Windshield posts are angled in such a way that the dogleg, so common in many cars, is completely eliminated . . . there's just great, wide, unobstructed door openings to breeze through. And, inside, there's inches more shoulder room, with more space for the legs, hip room, too . . . for *six* big people.

So, for *big savings* and *big size,* Ford's your best business car buy! FORD DIVISION, Ford Motor Company,

Based on manufacturers' suggested retail prices for comparably equipped models

'60 **FORDS**

FALCON

FORD

best for business
whether you buy or lease!

WASHINGTON Business Front

JOSEPH R. SLEVIN

WASHINGTON, D.C.—The Federal Government is the world's greatest collector of facts. It can tell you yesterday's egg prices, last week's department store volume, and last month's wage and salary payments. If you want to know how many Asian flu cases there were in New York, it can supply that information, along with such other tidbits as the number of felonies in Iowa, the size of bank deposits at the close of business on Wednesday, the number of occupied hotel rooms in February, and the amount of fish in cold storage at the end of the month.

The Government doesn't just collect facts. It publishes them, interprets them, and, on occasion, it even makes them up. The last may sound like an evil operation, but it isn't. The people who make up facts are highly skilled, moderately well-paid, and completely honorable civil servants. They are known professionally as statisticians.

One of the many ways they make up facts is to take a "sample" and then "blow up" the sample into a national total. The Census Bureau, the biggest of the Federal fact gatherers, does that when it surveys 35,000 households in 330 communities each month and then announces the number of unemployed workers in the United States. The Census statisticians say the chances are two out of three that there is a difference of less than 100,000 between their estimate and the precise total that would be obtained by a nose-count of jobless workers.

The Government collects so many facts that a 111-page booklet is needed just to describe the activities of the statistical agencies. A 20-page bibliography lists the major reports that the agencies issue. These include the 952-page Federal budget, the 243-page *Economic Report of the President,* the nine-volume Agriculture Department handbook, and the 1,016-page annual *Statistical Abstract of the United States.*

The Federal Reserve Board publishes a monthly *Bulletin.* So does the Treasury Department. The Labor Department issues a *Review* and the Commerce Department a monthly *Survey of Current Business.* All four journals carry page after page of essential facts and figures.

Business men want more facts

There was a time when Federal statistics programs were a prime target of business men and other economy advocates who wanted to slash the size of the Federal Government. Some business men still resent having to satisfy Government demands for information, but the objections usually come from the man who has to fill out the forms rather than from the man who uses the information after it has been pulled together.

The disposition of business now is to demand more information rather than less. The Government is under continuing pressure to expand its statistical activities.

These demands are steadily boosting the cost of Federal statistical programs. Congress hasn't been voting all the money that President Eisenhower has requested, but it has come close. The lawmakers outdid themselves last summer after the steel strike began. The Labor Department sent up a special plea for $1.05 million to carry out new studies of wages and productivity, and Congress voted all but $50,000 of it.

The Government spent $36 million on its regular statistical programs in fiscal 1959, the year that ended last June 30. It expects to pay out $39.1 million during the current year, and the President has asked Congress for $42 million for next year.

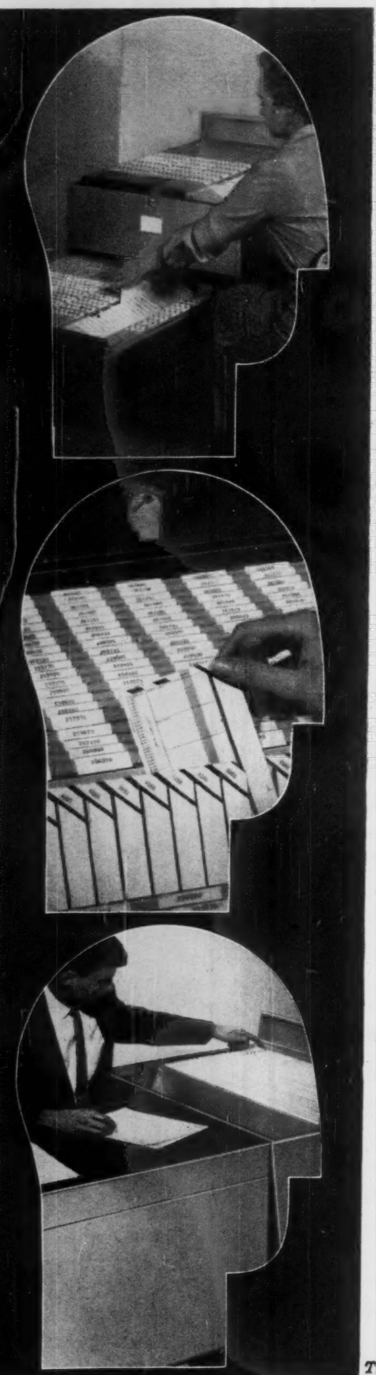
But these figures tell just part of the story, for they cover only the cost of the normal, day-to-day, week-to-week statistical operations. They do not include the cost of jobs such as revising the Bureau of Labor Statistics' consumer price index (a $1.2 million item in fiscal 1961) or the statistician's delight—the periodic censuses.

Some 160,000 field enumerators and 10,000 crew leaders will sally forth next month for the Decennial Population and Housing Census. An-

» *Business men are gaining valuable information benefits from Uncle Sam's $39 million fact-gathering service.*

» *To meet the demands of users, the Government is expanding its statistical surveys of commerce and industry.*

» *Government experts see short-term improvement in the U.S. trade balance, but some fear new troubles by 1961.*



here's how VISIrecord

split-second record location

. . . at KELLOGG CO.

accelerated processing 33%...

One *VISIrecord* system now handles the scheduling and controlling of preventive maintenance for 96 departments. Processing of requisitions was accelerated at least 33%.

. . . at J. W. ROBINSON, CO.

reduced inventory time 248 man hours...

The *VISIrecord* furniture unit control system also helped increase turnover from 2.8 to 3.5, reduced merchandise return by 10% and cut delivery time.

. . . for the WEATHERHEAD COMPANY

saved over $40,000 the first year...

A *VISIrecord* system provides finger tip access to accurate records of carriers and routes for shipments to any part of the country. The traffic manager and one clerk check all shipments, picking the most economical carrier.

The world's fastest visible record keeping system

...can help you

VISIrecord Systems Specialists have the know-how to analyze your record-keeping set-up. Their experience and the facilities available to them will enable them to provide you with a time and money-saving system. Write to Dept. DR-2 for case histories on above and any other applications.

VISIrecord

VISIrecord, Inc.

375 PARK AVENUE, NEW YORK 22, NEW YORK

SYSTEMS SPECIALISTS IN PRINCIPAL CITIES

other 30,000 enumerators and 2,000 crew leaders carried out the quinquennial agricultural census last October. The Government took a Business, Manufacturers, and Minerals Industry Census in 1958, and it will take another in 1963. It surveyed state and local governments in 1957 and will do so again in 1962.

The cost of the 1960 Decennial Census is set at $118 million. It will be a much bigger census than the 1950 survey, for the population is larger and additional questions are being asked. But the Government expects to pay about what it paid last time. The difference is in the tabulating method. Electronic computers and newly developed microfilm tape will be used this time around.

Better business barometers

One major business barometer recently has been overhauled from top to bottom and two others currently are being refurbished. Work on the Federal Reserve Board's closely watched industrial production index was completed last fall, and the results were published in December. The BLS recently has started to recast its consumer price index—the barometer that wage escalator contracts are tied to—and intends to complete the job by January 1964. Simultaneously, the Commerce Department is beginning a long-overdue strengthening of the Government's flimsy construction statistics.

A number of other promising studies currently are underway in the Commerce Department. It is overhauling its important retail sales series and hopes eventually to issue weekly retail sales reports instead of only monthly estimates. It is taking over the Federal Reserve's department store series, and the new retail estimates will include a weekly breakdown of GAAFF sales—a code name for general merchandise, apparel, appliances, furniture, and furnishings.

One of the biggest gaps is the lack of current information on consumer spending for services. The Commerce Department wants to plug the hole by working up a monthly series that will record consumer expenditures for laundries, repair services, theaters, motels, and other services.

There is mounting pressure from economic forecasters and from business men for reliable, official surveys of anticipations. Federal Reserve-financed surveys of consumer buying plans have proved valuable to producers and to distributors as well as to Government economic analysts, and the Census Bureau is studying the feasibility of regularly including consumer buying questions in its monthly population sample of 35,000 households. The Commerce Department's Office of Business Economics simultaneously is asking business men what they plan to do about adding to inventories and what they expect to receive in the way of new orders. The queries are designed to broaden the Government's existing quarterly survey of business plans for buying new plant and equipment—the best of all the surveys of expectations.

The Commerce Department is seeking funds to make an annual survey of state and local government expenditures. They currently total about $50 billion a year and are growing at a yearly rate of $4 billion.

Trade Balance Outlook

Government experts are optimistic about balance of payments prospects for the short run but disagree about what will happen after that.

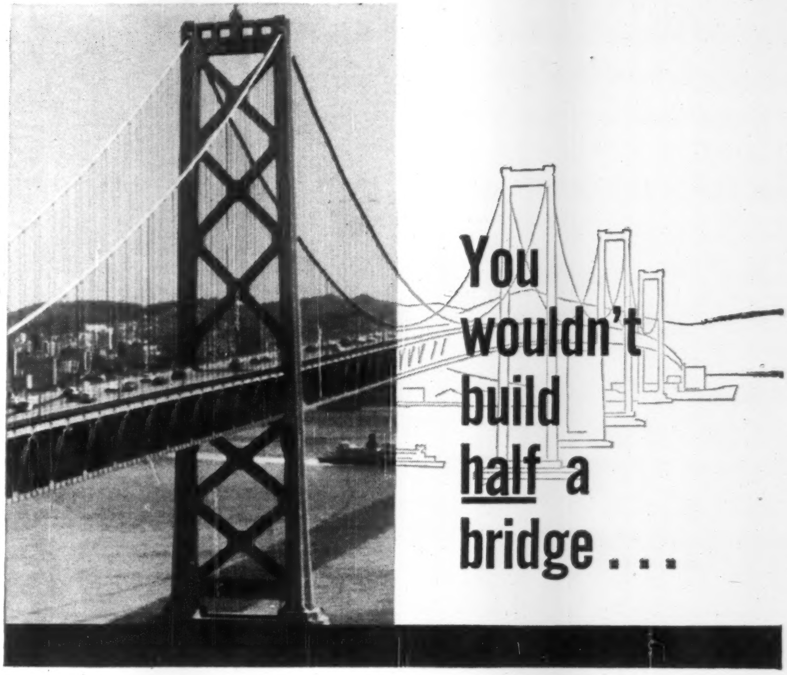
They forecast that the worrisome payments deficit will drop to $2.5 billion this year from about $4 billion in 1959. Sales of cotton are due to climb sharply this year. So are exports of grain and of jet planes. There is a notion, too, that more American automobiles will be sold in foreign markets in 1960 than in 1959.

But appraisals of the 1961 outlook vary greatly. Some experts think the payments deficit will hover about the $2.5 billion mark or even drop a little. Others think it will rise slightly and will put fresh pressure on the dwindling U.S. gold reserve.

The Credit Stimulant

Chances are that the Federal Reserve System will make credit less easy in the next recession than it did in the 1958 downturn. It believes that it supplied too much money last time. People with idle funds speculated in Government bonds, and the surplus cash provided too much liquidity during the following business upturn.

The necessity of protecting the U.S. gold reserve may prove an additional deterrent. The Federal Reserve cannot let rates get so low here that investors will be tempted to transfer funds to London, Berlin, Zurich, and other money centers. END



Like a bridge, a business transaction isn't worth much until it's completed . . . when your invoice is paid. After you've made the sale and the shipment, AMERICAN CREDIT INSURANCE helps you finish the job . . . *completes* your profit cycle . . . *protects* your capital investment in accounts receivable.

The one thing that permits *deeper* market penetration is security . . . the security of commercial credit insurance. AMERICAN CREDIT INSURANCE facilitates sales progress . . . helps you *add more* new customers, *sell more* to present customers . . . by elevating lines of credit with security and stability.

Is *your* credit insurance policy up-to-date?

Extend your market penetration . . . your profit protection . . . with American Credit Insurance

A C I

. . . commercial credit insurance exclusively since 1893

Call your insurance agent . . . or our local office. Send for informative booklet on the many sound advantages of modern credit insurance. Write AMERICAN CREDIT INDEMNITY COMPANY of New York, Dept. 50, 300 St. Paul Pl., Baltimore 2, Md.

CREDIT INSURANCE

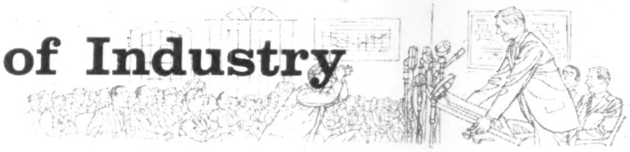
Take one good decorator with a penchant for sound design . . . add a judicious selection of ASE furniture . . . and you'll come up with the kind of office you can be proud of . . . and will be for years.

ASE

ALL-STEEL EQUIPMENT Inc., Aurora, Illinois

Desks • Chairs • L-units • Credenzas • Tables
Bookcases • Filing Cabinets • Storage Cabinets

Voice of Industry



Needed: Better Salesmanship Abroad

A Record Year for Construction

Growth Prospects in the Electrical Industry

The Threat of Anti-Business Legislation

R. HARVEY WHIDDEN, *vice president, Bulova Watch Company, Inc.*

A Dangerous Complacency

The best way American industry can meet the challenge of foreign competition is to go back to work. There's too much fiddling around and what might be called narcissism on the part of the American manufacturer who may not be quite as good as he thinks he is. What has happened to the urge to compete and the willingness to get down to work? It appears this is the age of the goof-off.

A reappraisal of foreign markets and American products is due. The American manufacturer is bemused and complacent with his own product, design, advertising, production, and sales organizations. He is so captivated with his skills and education that he tends to deprecate foreign goods as either too high style, too expensive, or too cheap. He fails to realize that the only qualified designer is the consumer.

The European consumer, while he does not yet have the purchasing power of his American counterpart, has nevertheless achieved truly middle-class status and now is ready to buy. When consumer credit and instalment buying take hold, the challenge of foreign competition for the American manufacturer will become even greater. But more sobering is the competition in the rest of the world where we must compete with European producers.

Past attempts by American producers to prevent higher U.S. imports of foreign goods by increasing tariffs have not worked. The only way to meet the challenge of foreign competition is through better product design and a better market approach.

From a speech before the American Society of Industrial Designers.

* * *

JOHN A. VOLPE, *president, John A. Volpe Construction Company.*

More Tools for Bigger Jobs

In every year since the end of World War II, the dollar volume of construction activity has risen to a new record. In 1959, despite the long steel strike, the total volume of construction surpassed $73 billion, as compared with $66.6 billion in 1958, representing the largest annual increase

the Right Combination...

QUALITY

"the CHALLENGER"
$397.50 complete
1500 lb. capacity
Model 1056—Battery operated

PRICE

"the DRUM HANDLER"
$890.00 complete
1000 lb. capacity
Model 3062—Battery operated

SELECTION

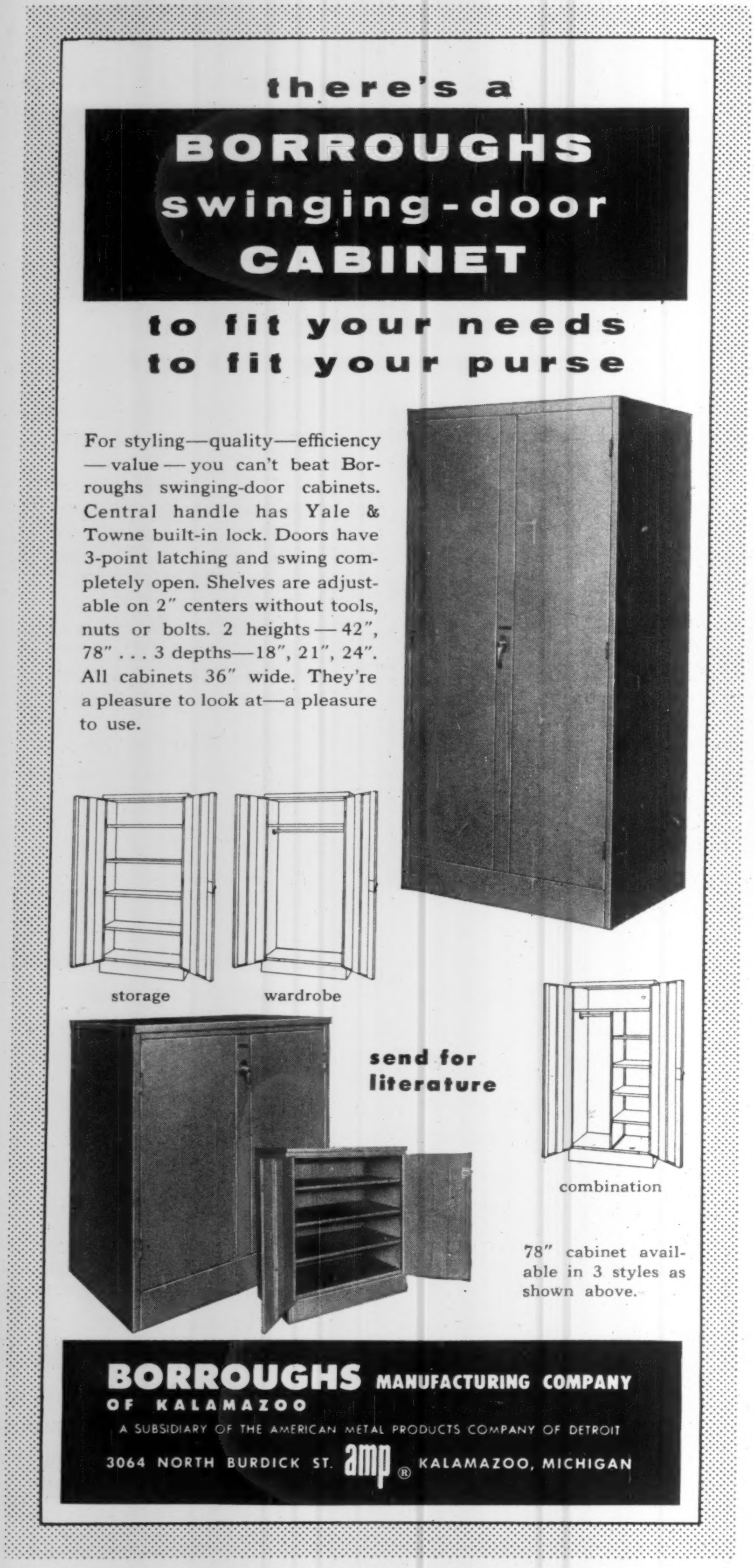
"the TELESCOPIC 99"
$699.00 complete
1000 lb. capacity
Model 9972T—Battery operated

MORE THAN 80 BIG JOE MODELS

Hydraulic Handling for *EVERY* Department

BIG JOE
Hydraulic Lift TRUCKS

BIG JOE
Manufacturing Company
Ralph Hines Road
Wisconsin Dells, Wisconsin


there's a
BORROUGHS
swinging-door
CABINET
to fit your needs
to fit your purse

For styling—quality—efficiency—value—you can't beat Borroughs swinging-door cabinets. Central handle has Yale & Towne built-in lock. Doors have 3-point latching and swing completely open. Shelves are adjustable on 2" centers without tools, nuts or bolts. 2 heights—42", 78" . . . 3 depths—18", 21", 24". All cabinets 36" wide. They're a pleasure to look at—a pleasure to use.

storage
wardrobe
combination

send for literature

78" cabinet available in 3 styles as shown above.

BORROUGHS MANUFACTURING COMPANY
OF KALAMAZOO
A SUBSIDIARY OF THE AMERICAN METAL PRODUCTS COMPANY OF DETROIT
3064 NORTH BURDICK ST. amp® KALAMAZOO, MICHIGAN

in dollar volume since the year 1950.

The outlook is for another increase to about $76 billion in 1960, provided, of course, there are no major upsetting influences. The total should consist of $56 billion in new construction and about $20 billion in maintenance and repair work.

The outlook for the construction equipment and machinery industry is decidedly brighter than it has been for the last two years, with an 11 per cent increase in shipments—up to $2 billion—forecast by the Government for 1960. The Government also forecasts an increase in production, shipments, and employment, and a rise of 2 per cent in prices for new equipment.

From a speech before the Associated Equipment Distributors.

»

RALPH J. CORDINER, *chairman of the board, General Electric Company.*

Output to Double

The use of electric power in the United States doubles every decade. The power supply industry tends to grow rather steadily, while the electrical manufacturing industry tends to grow in surges related to the general business cycle. It is obvious, however, that the manufacture of equipment to generate, transmit, distribute, and utilize electric power is closely correlated to the curve of power use.

The 1960's will see a vigorous growth in national output, in response both to domestic demand and the pressures of economic competition with the Communist bloc, which will mean an increase in power use. The curve of power use in other countries may rise just as fast.

As to the longer-term future, in 1956 I suggested that the output of electrical goods in the United States, then about $20 billion a year at manufacturers' selling prices, could rise to $44 billion by 1966 and to $90 billion by 1976 on a constant-dollar basis. This still represents our considered estimate of the opportunity for electrical manufacturers in the decades ahead.

From a speech at a dinner honoring the Board of Directors of General Electric.

»

ERWIN D. CANHAM, *president, U.S. Chamber of Commerce.*

Congressional Scapegoat

This is an election year, and many Congressmen will be seeking vote-getting legislation—the kind which will fly in the face of both facts and reason but packs a strong emotional appeal. Some Congressmen would also like to placate those union leaders who were upset last year by the passage of the labor reform bill.

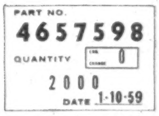
Unfortunately, an uncomfortably substantial element in the Congress considers business control legislation as the happiest solution to both of these problems.

We have proposals to raise the minimum wage, to set up Federal rules for state unemployment compensation programs, to control prices and instalment credit, and to require functional discounts to wholesalers.

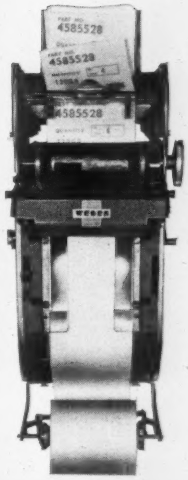
We are dangerously close to having our competitive economy replaced by a regimented system controlled from Washington. We can reverse the trend, but only if business men work harder in creating a better economic understanding of our business system, in becoming more persuasive spokesmen on Congressional issues, and in participating effectively in their chosen political party.

From a speech before the National Retail Merchants Association.

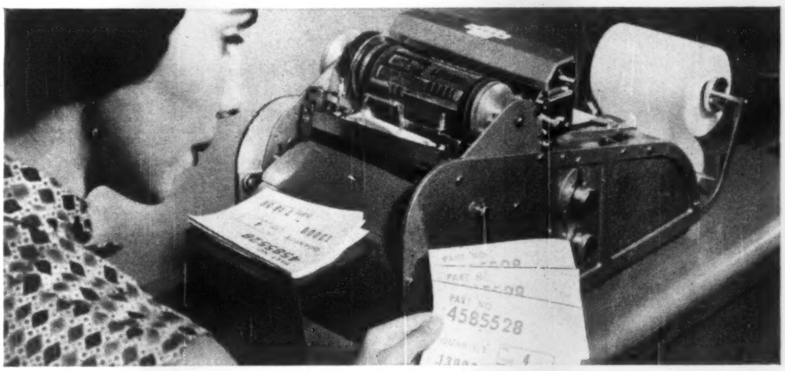
STOP BUYING LABELS Print your own—as you need them!



PART NO.
4657598
QUANTITY 0
2000
DATE 1-10-59



MYSTIK ADHESIVE PRODUCTS
Pressure Sensitive Adhesive Products
CHICAGO 39, ILLINOIS
TO
WEBER MARKING SYSTEMS
Weber Industrial Park
Mount Prospect, Illinois



Weber Label Printing Machine produces product identification or content labels when, where and as they are required. Cuts costs, eliminates label inventory problems!

No matter what volume or assortment of labels you use—shipping, product identification, carton content, box end, etc. — a portable Weber Label Printing Machine in your office or plant saves money, time and effort. Compact, typewriter size — this fully automatic machine prints, counts, cuts to the size desired, and stacks labels at the rate of 105 per minute.

With a Weber Label Printer you no longer need to buy, store and inventory large quantities of labels. It enables you to print your own as you need them. You get control and complete flexibility—print shipping labels one minute, product identification or packing slips the next. The Weber Label Printer can be adjusted in seconds to satisfy all your requirements for different sizes and varieties of labels for use in shipping, production, packing, inspection or for other departments. Prints from either a stencil or rubber mat on practically any roll stock—gummed, ungummed, linen or pressure sensitive. For more detailed information on the various Weber Label Printers, mail the coupon below.

Weber
MARKING SYSTEMS
Sales and Service in all principal cities

WEBER MARKING SYSTEMS, INC.
Dept. 30-C
Weber Industrial Park
Mount Prospect, Illinois

reduce
marking costs
90%

Please send me complete data on Weber Label Printing Machines.

Company_____
Individual_____
Position_____
Address_____
City_____ Zone_____ State_____

GRUNDIG STENORETTE
0 10 20 30 40 50 60 70 80 90 100
Stenorette

The revolution in

Fully Transistorized Stenorette-T with either dictating or transcribing accessories—only $199.50 plus FET

dictation starts with Stenorette®

Junk costly cylinders– and those one-shot discs and belts

One re-usable Stenorette tape outlasts thousands of these relics!

The big, big change in dictation is the compact, *fully-transistorized* Stenorette. It has made all other machines overpriced, obsolete or inadequate. Now you can dictate with just one finger on the microphone . . . faster, easier, *without errors*. And because the Stenorette records on *magnetic* tape that you can use over and over, its low operating cost will amaze you!

Executives . . . end complex dictation! A handsome Stenorette—fully transistorized for instant warmup—makes you an expert instantly. No frantic fingering. No embarrassing mistakes. With one-button "mike-center" control, you dictate, backspace, review—and if you say it wrong, erase as you say it again *right!* You record clearly even over boiler-factory noise.

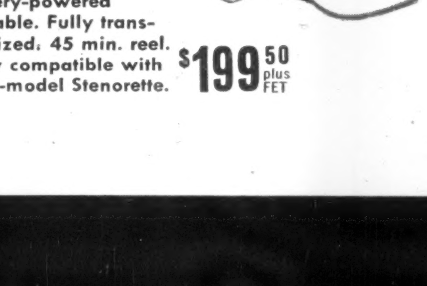
Secretaries! Transcribe faster, easier. No pre-listening for errors. There are none. You type it right the first time. And you'll like the way Stenorette plays back. No sudden shouts or whispers. Automatic Voice Control gives you uniform volume at all times.

Office managers! Imagine how much your office can save with re-usable, magnetic Stenorette tapes alone. And no other machine compares in cost, quality or features. A complete Stenorette system—coordinated for both dictating *and* transcribing with desk models for your office, portables in the field—costs half that of other systems!

Ask for a revealing 15-minute demonstration (and free trial in your own office) . . . the quickest way to learn about *the revolution in dictation that starts with a Stenorette.*

DeJUR GRUNDIG **Stenorette®**

—more DeJur-Grundig Stenorettes are sold in the United States than all other magnetic dictating machines combined.

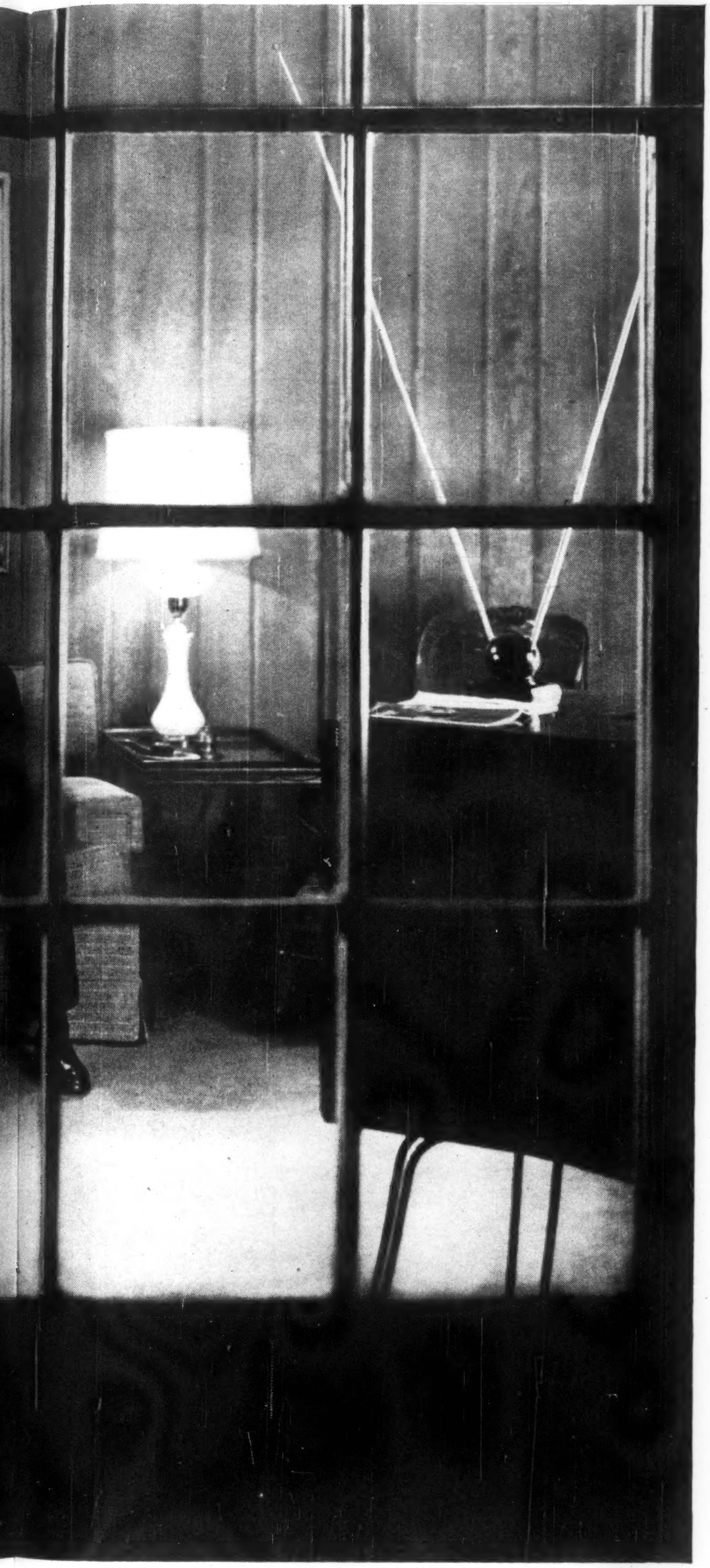


Stenorette®
COMPANION.
Battery-powered Portable. Fully transistorized. 45 min. reel. Fully compatible with desk-model Stenorette.
$199.50 plus FET

DeJUR-AMSCO Corporation, Business Equipment Div.
Northern Blvd. at 45th St., Long Island City 1, N. Y.
6011

Send booklet about the revolution in dictation ☐
Have your representative call for a demonstration ☐

Name__________ Title__________
Company__________
Address__________
City__________ Zone_____ State__________



Electronics brings everybody closer together

...and commercial banks help the whole industry serve us better

In television receivers and aircraft radar. In long-distance phone lines, automatic computers and missiles. In a thousand devices, massive and minute, electronics helps erase time and space and brings all men closer together.

And commercial banks play a leading part in electronics' spectacular progress.

Bank loans help manufacturers stock raw materials and pay for the precision machines that convert them into finished products. Bank loans help electronics companies expand and keep up with progress. And in the consumer market, banks frequently supply money to help neighborhood dealers stock everything from miniature radios to console organs.

As the leading lender to American industry, The Chase Manhattan Bank is proud that commercial banks contribute money, credit, financial services and advice to the growth and vitality of electronics.

THE
CHASE
MANHATTAN
BANK

CHARTERED IN 1799

Head Office: New York 15, N. Y.

Member Federal Deposit Insurance Corporation

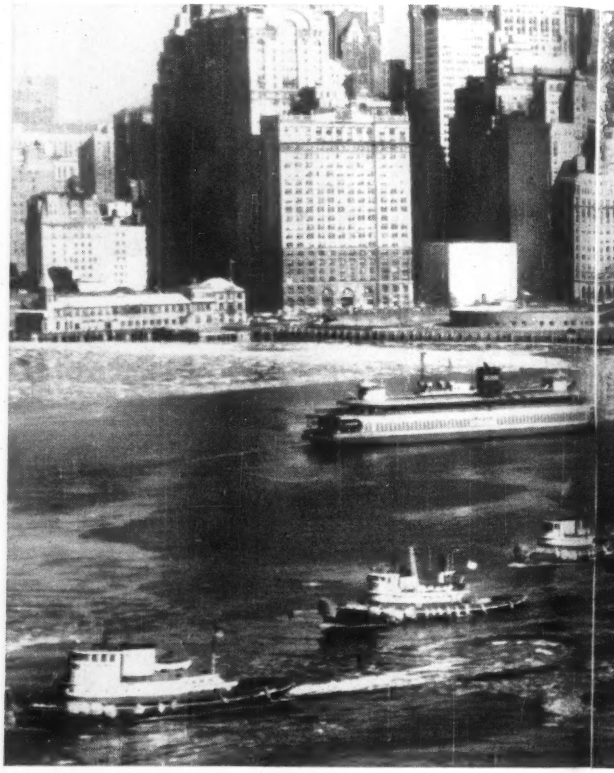
When the first USS *Independence* was commissioned in 1776, you probably could have put all the steel aboard her into one sea chest. But when the fifth *Independence* joined the U.S. fleet this year, she carried the widest variety of specialty steels ever assembled. *57,000 of her 60,000 tons are steel.*

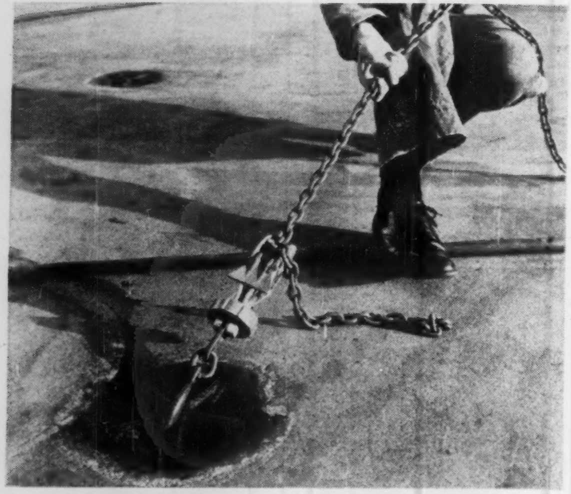
The *Independence* is big. She carries a crew of 3,500 and her quarter mile of runways could park two luxury liners side by side. Turn her on end and she'd reach up to the 80th floor of the Empire State Building. Total working area for flight operations is over six acres.

The *Independence* is built of steel, much of it supplied by United States Steel. For the greatest possible strength and toughness U.S. Steel furnished two types of specially formulated and treated armor plate. Steel cables, strong enough to stop a landing jet bomber, were furnished by the American Steel & Wire Division of United States Steel. Her four 66½-foot, 50-ton propeller shafts were forged at the USS Homestead Works. And so it goes. From flight deck armor to the stainless steel used in her hospital, galley and crew's quarters, USS Steels play an important part in the performance of one of the Navy's finest ships.

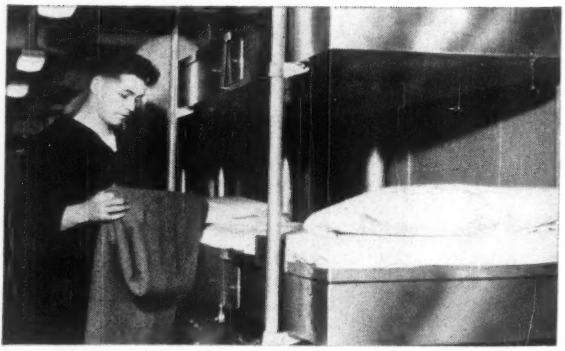
It took three years to build *Independence*. It took 50 years of research and development to perfect the specialty steels of which she is made. *USS is a registered trademark*

57,000 tons of steel



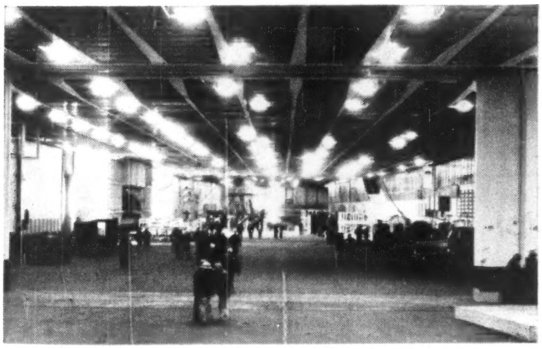


Something new in tie-downs. Instead of welded tie-downs, *Independence* has dimples placed at specified points in flight and hangar deck armor. U. S. Steel developed special dies for use in a 12,000-ton press, worked with the plate while it was cold. Danger of welded-in units breaking loose from overhead blast is now eliminated.



Hammocks are a thing of the past. Pullman-type bunks with individual reading lights make crew's quarters much more comfortable.

go to sea with the USS "Independence"



Lots of room, lots of steel here. Hangar deck aboard *Independence* can store 100 jets, is as big as two and a half football fields.

United States Steel

MESSAGE TO AN IMPATIENT MAN

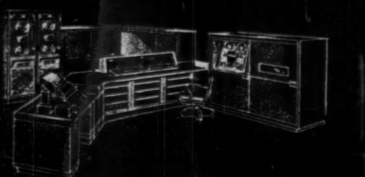
NO
TIME LAG

WITH
THE PHILCO
2000 COMPUTER

The Philco 2000 Electronic Data Processing System is the world's fastest because it is the only asynchronous system commercially available today! Each operation starts the instant the previous operation is completed, without waiting for a pre-set clock pulse. Asynchronous operation eliminates the time lag that occurs in all clock-timed systems . . . processes more work in any period saves costly waste of time. The Philco 2000 is the pioneer in all-transistor logic and circuitry . . . the computer that changed the industry.

PHILCO®

Famous for Quality the World Over



PHILCO 2000
DATA PROCESSING SYSTEM

Will not become obsolete

Because the Philco 2000 is truly asynchronous, newly developed components and design improvements may be incorporated at any time, without redesign of equipment and with no reprogramming. The system can always be updated, at minimum cost.

• • • • •

Complete customer service.

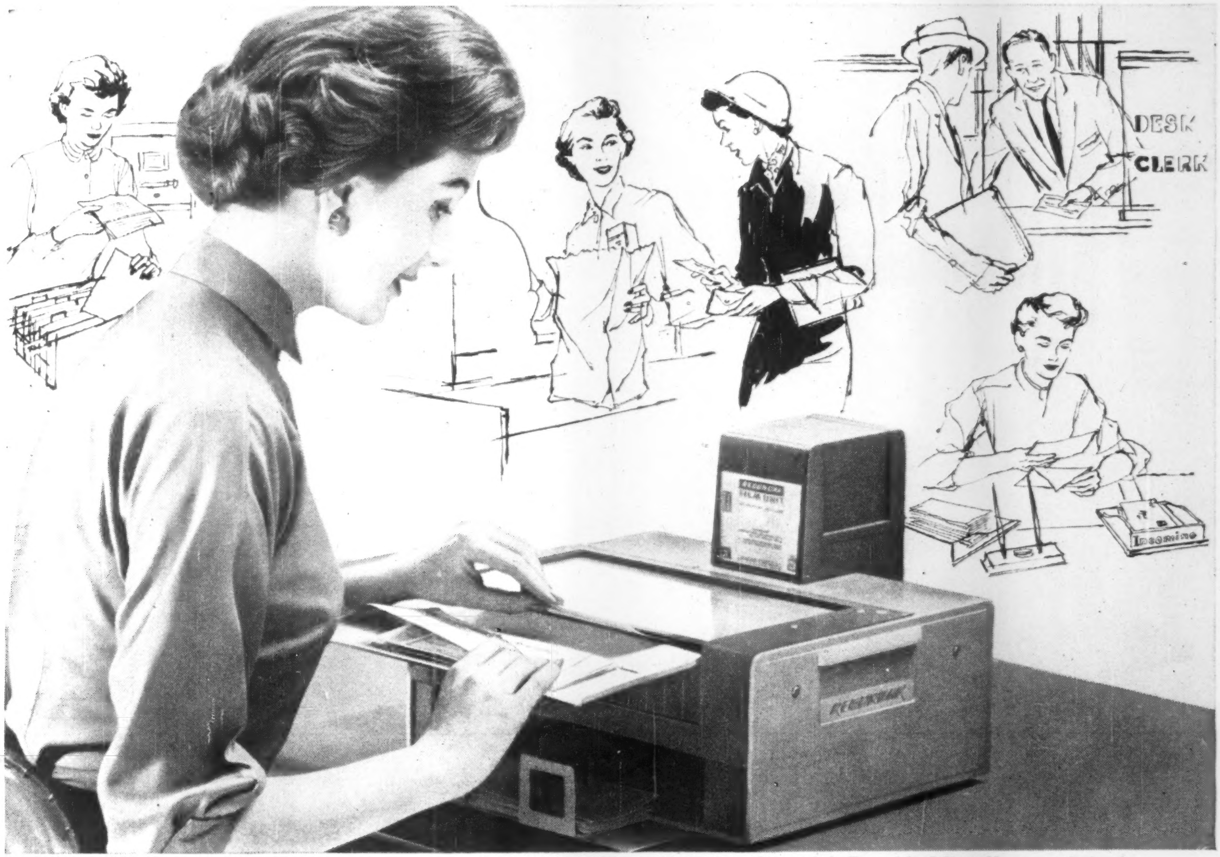
Philco provides every important service, including: automatic programming, programming library, on-site maintenance and training tailored to your needs.

• • • • •

WRITE today for your copy of this new brochure on the Philco 2000 computer . . . the *first* fully-transistorized large scale data processing system and the *only* asynchronous general purpose system available.

• • • • •

GOVERNMENT & INDUSTRIAL GROUP
COMPUTER DIVISION
4700 WISSAHICKON AVENUE
PHILADELPHIA 44, PENNSYLVANIA



Just feed documents into new Recordak Portable Microfilmer and they're photographed instantly (for a fraction of a cent each) and returned in sequence

How to save money before banking it!

Here's a check-handling short cut with Recordak Microfilming that every business can use

Thousands of businesses—some like your own—have found an easy way to take much of the work and risk out of handling incoming checks. Just take their pictures with a Recordak Microfilmer. This eliminates keeping a costly handwritten record of every check, and it ends transcription errors, too.

So much safer. All it takes is one missing check to prove the extra value you get from microfilming. Recordak can produce facsimiles of all lost or stolen checks from your Recordak films. With these prints in hand, you can collect with minimum inconvenience.

New Recordak Portable Microfilmer provides fast, convenient microfilming. You just feed items—up to 90 checks a minute, for example—and they're photographed and returned in sequence. No skill needed. Recordak's full line also includes completely automatic microfilmers for larger concerns.

RECORDAK®
(Subsidiary of Eastman Kodak Company)
originator of modern microfilming
—now in its 32nd year

IN CANADA, contact Recordak of Canada Ltd., Toronto

MAIL COUPON TODAY

RECORDAK CORPORATION HH-3
415 Madison Avenue, New York 17, N.Y.

Gentlemen: Send free booklet giving details on new Recordak Portable Microfilmer.

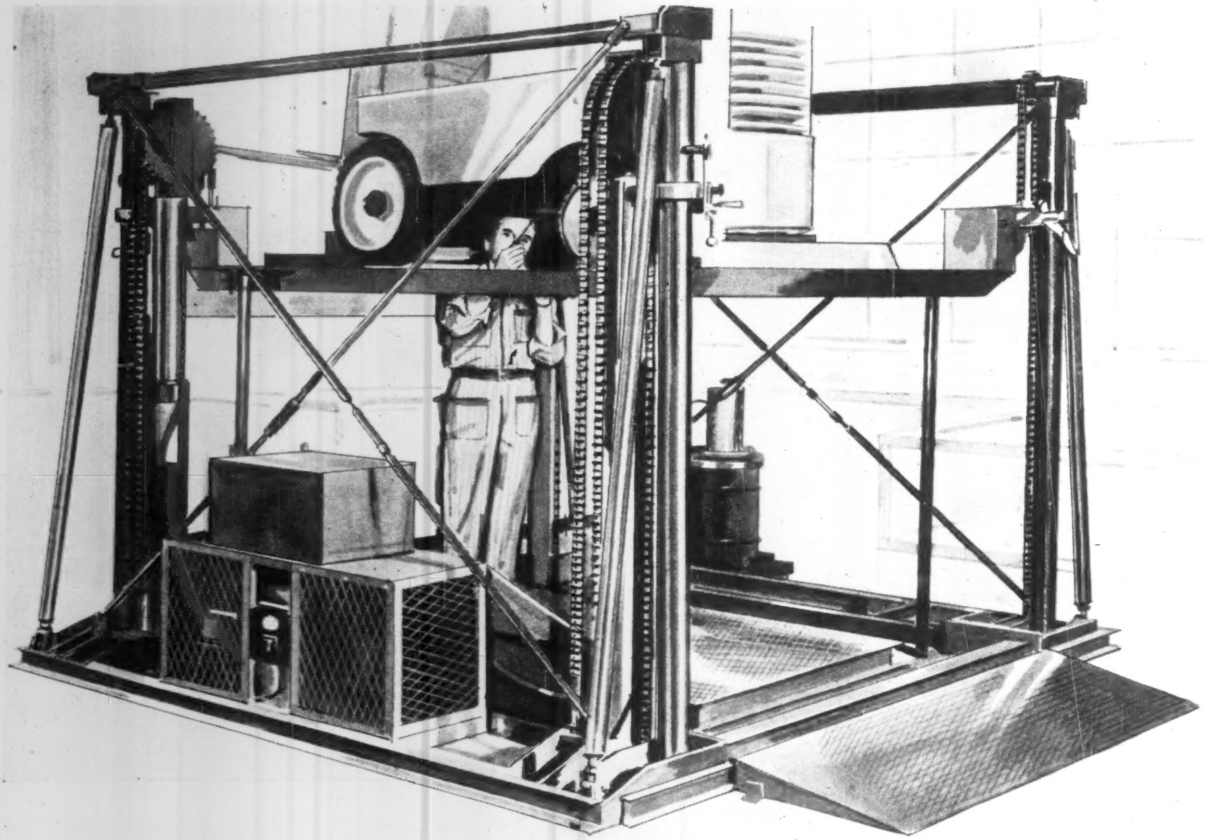
Name____________________

Position____________________

Company____________________

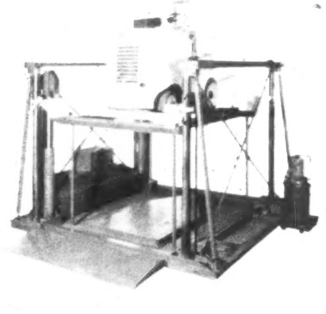
Street____________________

City____________________State__________



from the ground UP Colson builds it better...

In manufacturing a complete line of maintenance machinery and equipment, Colson considers the specific job to be done. Each individual unit is built from job-proven designs, from the finest materials. Literally from the ground up, Colson builds it better, backed by 75 years of experience. Colson equipment provides quicker, safer, easier ways to do rugged jobs. A Colson "crew" of equipment can make any business run smoother, and cut costs by using manpower more effectively. Colson products prove, by outperforming and outlasting all others, that quality costs less when you buy the best . . . Colson.



COLSON'S 75th YEAR OF PROGRESS

75 years of experience in supplying field-tested equipment and casters to industry and institutions. Millions of satisfied customers know and respect the name COLSON . . . synonym for quality.

LUBRILIFT LETS MAINTENANCE CREWS GET UNDER AND INSIDE

The Colson Lubrilift is designed to facilitate greasing fleets of 3 ton and 6 ton fork lift and other trucks with maximum efficiency, economy and safety. No pit is needed. There is no sub-surface installation required. Lubrilift can be installed on upper floors or relocated easily. It provides complete access to underside of truck or tractor. Besides Lubrilift, other industrial platform and maintenance lifts, portable and stationary, are available from Colson. Send for free illustrated catalog today.

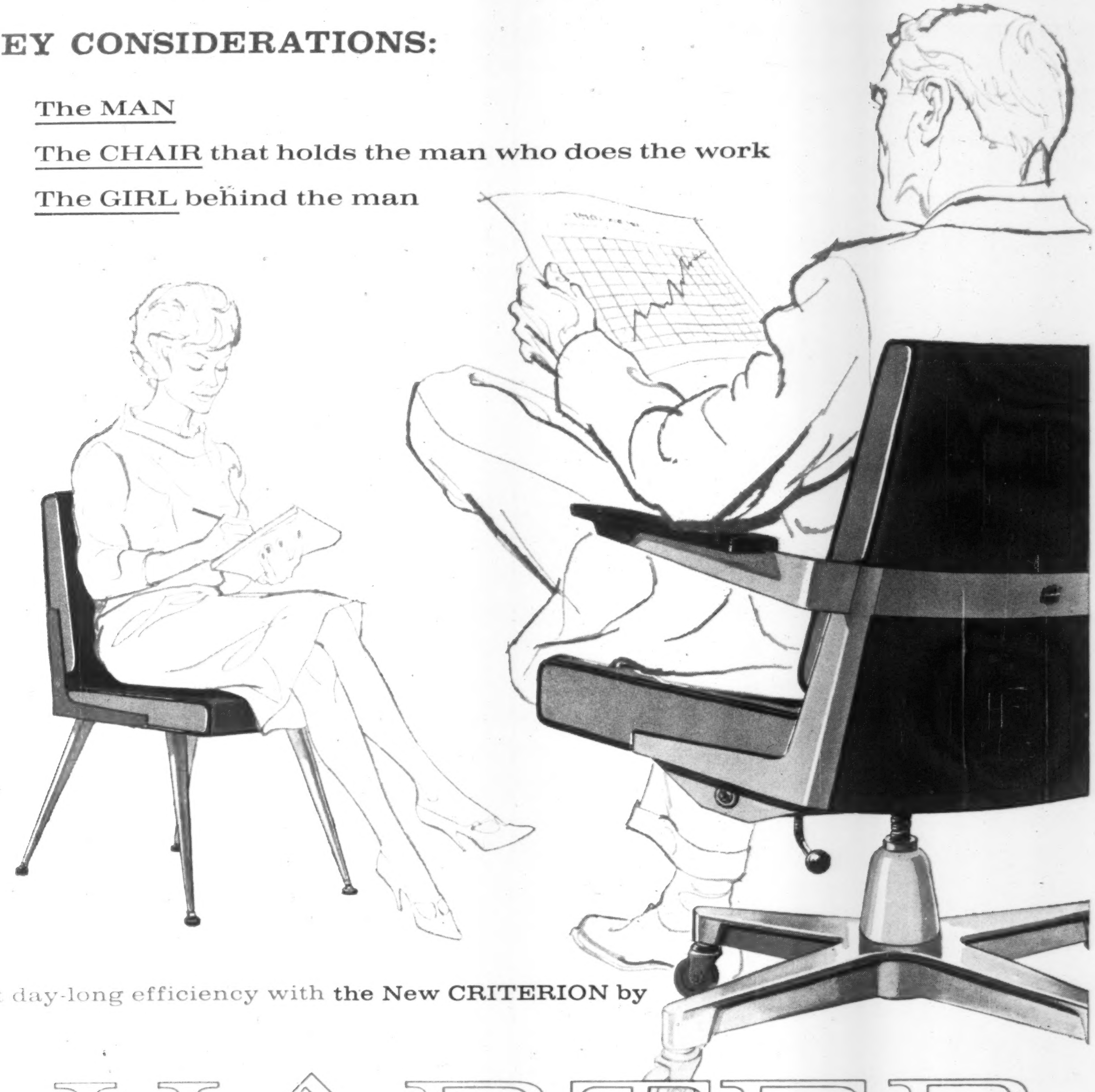
THE COLSON CORPORATION 7 S. Dearborn Street
Plants in: Jonesboro, Ark.; Sommerville, Mass. and Elyria, Ohio CHICAGO, ILLINOIS

KEY CONSIDERATIONS:

The MAN

The CHAIR that holds the man who does the work

The GIRL behind the man



Get day-long efficiency with the **New CRITERION by**

HARTER

SPECIALISTS IN SEATING AND SEATING ONLY FOR OVER 30 YEARS

Model 41400

Model 41430

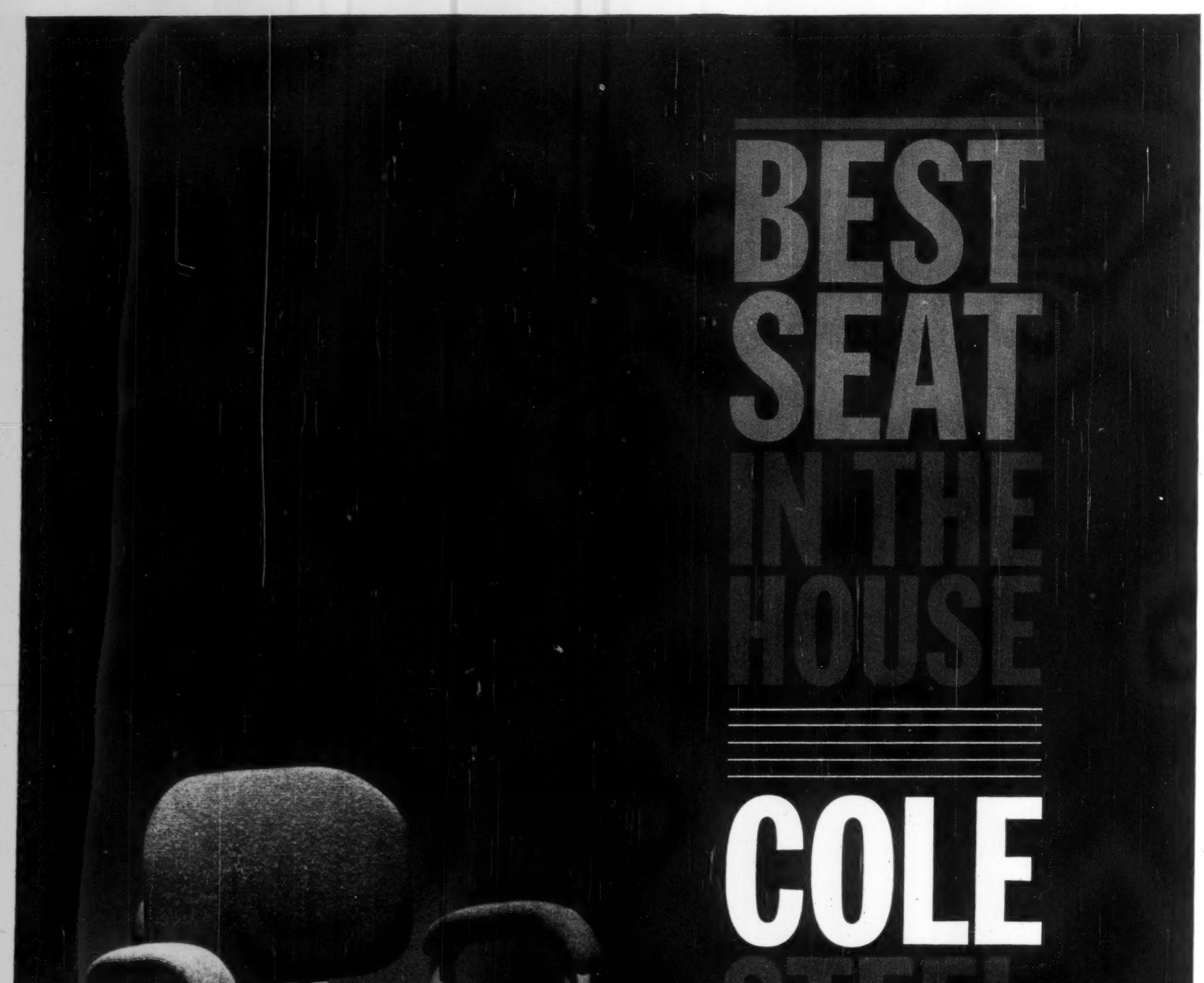
Model 51410

Criterion's clean, crisp lines complement any decor. Unique cantilever arms allow complete leg freedom. Bridge-strong steel construction assures long chair life. Deep foam cushions in seat and back for cool comfort all day long.

The most important piece of furniture a man or woman uses in an office is the chair. Other furniture holds the work . . . *the chair holds the worker!* The worker's alertness and efficiency depend largely upon the chair he sits in. And he can't sit in a better chair for top accomplishment than the new Harter Criterion . . . it is designed for a fuller day's work. Invest in Harter Chairs for productivity dividends!

Get free full color literature by return mail. Just clip this coupon, print your name on your letterhead, and mail to:

HARTER CORPORATION
3002 Prairie Street, Sturgis, Michigan
Canada; Harter Metal Furniture Ltd., Guelph, Ontario


BEST
SEAT
IN THE
HOUSE
COLE
STEEL

SEND FOR OUR FULL COLOR CATALOG: COLE STEEL EQUIPMENT CO., INC., 415 MADISON AVENUE, DEPT. 19, NEW YORK 17, N. Y.

DUN'S
REVIEW
AND MODERN INDUSTRY
March 1960

EDITORIAL

The Competitive Spirit

SALMON bred from roe in fisheries have a rough time of it when released in tidal waters. The synthetic environment which eliminates danger also dulls the competitive instinct so necessary for survival in a cannibalistic world. The way of nature is rough and hard, whether it is hound against hare, falcon against dove, midge against elm, or crab grass against Kentucky blue.

Risk is the price of a day's adventure. Complete security is an obvious contradiction in terms, just as 100 per cent insurance against any danger or difficulty is as meaningless as it is unwarranted. Risk is an inherent quality in life, and with risk is the compensating impulse to survival which is competition.

For instance, thousands of business enterprises fail each year, with financial loss to suppliers and personal loss to proprietors. Can commercial insolvency be prevented? Not entirely. Not in a competitive economy. The right to fail is just as inherent in free enterprise as the right to succeed. Commercial failure is part of the normal wear and tear on the machinery of production and distribution. However, risk implies caution, and caution comes with understanding and experience of the hazards of "going to market." Most commercial failures are personal failures caused by a mixture of overconfidence and undertraining for the responsibility.

For more than a century, DUN & BRADSTREET has maintained commercial insolvency records, and although the rate of failure fluctuates with good times and bad, the reasons for failure are consistent. Most failures are due to controllable errors in the judgment of men, rather than "acts of God" in which man is a victim of accident or circumstance. Innovations in technology, styles, or marketing methods influence the trend of a business, and the real test of management skill and stamina often occurs during such shifts. The loss of capital in commercial failure is less significant than the loss in morale, because dollars are easier to recoup than faith in one's ability as an entrepreneur.

Some enterprises fail, recover confidence as well as capital, and start again. There are thousands of business men who have converted the stigma of bankruptcy to a wound stripe, and those who have paid their creditors in full have made it a badge of honor.

There can be no immunity from danger, whether in little, middle, or big business. Many fine textbooks have been written to guide the manager around hazards, but there are no infallible patterns for success, nor cure-alls for errors in judgment. We learn to swim by swimming, and we learn best against the tide.

Mother Nature isn't sentimental about the welfare of her creatures. However, she has an instinct for checks and balances. She increases the speed of the timid, the resistance of the weak, the immunity of the sensitive, and the armor of the sluggish, but she never eliminates individual risk.

The business life is a spirited enterprise, and it offers exciting compensations. But daring must often outweigh caution where decisions must be made. The more we seek shelter, the more we invite mediocrity. There comes a time when we must face realities with the forthright understanding that we are on our own. No fighter ever won a championship punching a bag or shadow-boxing, and no business man can succeed or survive without exposure to competition.

A PRESIDENTS' PANEL REPORT

Does the chief executive, as some say, meddle too much in advertising for the company's own good? Or does he abdicate his responsibility for setting policy and determining results to advertising agencies? To what extent is the president accountable for false or misleading advertising claims? A new Presidents' Panel survey comes up with some surprising, straight-from-the-shoulder answers.

What Industry's Leaders Think of ADVERTISING

COMPANY presidents expect to spend a larger slice of their corporate income on advertising in the next five years. But they aren't sure just how much of it will pay off.

They believe advertising will become a more valuable marketing tool in the years ahead. But they claim they have no real measure of its effectiveness.

They assert that company chiefs generally should—and do—delegate responsibility for advertising decisions. But they admit they sometimes get involved to the extent of suggesting or changing media or copy.

In all their opinions, the leaders of American industry reflect a broad faith in advertising. But it is a faith deeply disturbed by doubts about advertising's ethics, its weaknesses, its waste, and most of all, its effectiveness as a marketing tool.

The chief executives who gave these opinions are members of the DUN'S REVIEW President's Panel, a group of 175 industrial leaders who head companies representing more than $23 billion in total assets and more than $32 billion in annual net sales. The typical Panel president runs a corporation with fifteen domestic plants and 10,400 employees. More than two-thirds of the companies are among the 500 largest companies in the United States, and they are in every industry from space technology to chemicals and food.

Advertising in boom years

These presidents are examining advertising today, and advertising's potential for tomorrow, in the light of an expected production boom that will require an all-out marketing effort. Experts are predicting the gross national product will reach $750 billion in ten years, an increase of about 50 per cent.

"We know," says the president of one of the largest corporations in the country, "that we can produce at any desired level. Now the question is this—at what level can we sell?"

In their answers to an extensive questionnaire designed to explore their views, their hopes, their problems, and their involvement in advertising, the Panel presidents express strong confidence that advertising will be an indispensable aid in meeting the marketing challenge.

Their expectations reinforce the bright hopes of advertising agencies, which claim that advertising will account for a larger share of the gross national product in the years ahead. The agencies foresee total advertising expenditures almost doubling, from about $11 billion in 1959 to $20 billion in 1970. This means an increase in advertising expenditures to almost 3 per cent of the gross national product by the end of the decade.

Industry's leaders agree. Roughly 60 per cent of the Panel members say that in their companies total advertising expenditures will increase in the next five years, both in dollars and as a percentage of net sales income.

These advertising expenditures will be more justified as they increase, for almost 80 per cent of the chief executives say they expect advertising to become a more valuable marketing tool in the next five years. The presidents also believe, three to one, that their objectives in advertising and the standards by which they evaluate advertising will change. Most of them say the standards will be better and the objectives will be more clearly defined.

But despite their great expectations, three out of four of the chief executives say that accurate yardsticks by which to measure advertising's effectiveness simply do not exist. Says one man, "The greatest problem in advertising is lack of effective yardsticks." Another comments, "What we need is a 'science of advertising control' as is now well developed in quality and production control."

Advertising experts admit this need. Richard F. Casey, vice president of Benton & Bowles, Inc., told the Advertising Research Foundation recently, "There can be no doubt that the most pressing, most urgent problem facing us today is the question of value returned for advertising investment and its corollary—measurement of those values."

Jay W. Forrester, professor of industrial management at the Massachusetts Institute of Technology, has pointed out the need for true advertising research seeking fundamental principles. Such research would provide a means of measuring advertising's use and effectiveness as an integral part of the corporate marketing operation.

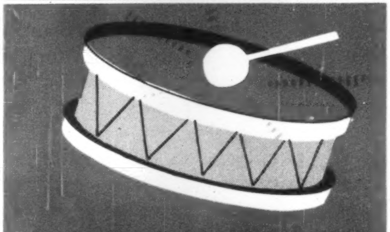
Without such measures today, what do company presidents do? They rely on a basic faith in advertising.

A majority of the presidents believe the amount of money they spend on advertising is fully justified. And most of them believe that they know what advertising can do for their company, despite the fact that as one man puts it, "To justify advertising expenses with tangible results is very difficult."

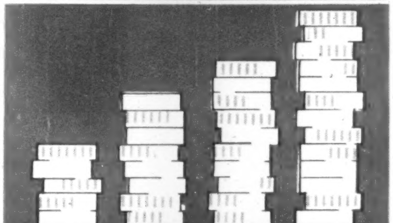
The head of a company that nets almost $400 million in sales annually adds, "In companies that employ salesmen, there is no definite yardstick whereby the president can clearly measure the effectiveness of advertising. He must rely on a combination of common sense and instinctive judgment."

Without adequate yardsticks, top management also has trouble tailoring advertising budgets. Most of Panel members say they prefer to plan budgets on the basis of the tasks to be performed. But almost half of them concede that budgets too often must be arbitrarily based on a percentage of net sales, last year's budget, or what their competitors are spending.

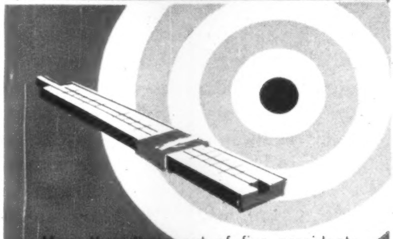
What Presidents Foresee in Advertising



Four out of five presidents believe advertising will be a more valuable marketing tool in the next five years.



Three out of five presidents expect to spend more money, as a percentage of net sales, on advertising.



More than three out of five presidents expect to sharpen their advertising standards and objectives.

A large minority of the Panel say the main things wrong with advertising today are waste, over-selling by agencies, and lack of a real selling message—all traceable to the absence of a definite understanding of exactly what advertising should accomplish.

However, even without an adequate gage, most of the Panelists have pretty well made up their minds in the debate which rages among big advertisers—how much of the budget should go for advertising aimed at immediate sales and how much for advertising geared to the longer-range payoffs.

Almost 60 per cent of the presidents surveyed say they'll maintain their present ratio between the two types of advertising in the future. Those who do foresee changes are about equally divided as to whether they'll swing more heavily to institutional or "hard sell" advertising.

In the process of deciding basic questions of advertising policy, more than half of the presidents report that they don't rely to any greater extent on the advice of their advertising agencies than they do on similar outside counsel on questions of production, accounting, or sales. About 45 per cent admit that they do put more trust in ad agencies than in other consulting agencies. However, two-thirds of this group contend that there are good reasons for giving ad agencies more say in policy matters.

"After all," one president comments, "advertising is somewhere between an art and a science." The head of another company says, "It does not seem to me surprising that we put trust in our advertising agency in view of the breadth of their experience in the advertising field."

"Advertising agencies," reports another chief executive, "have developed unique skills in such areas as copy, market research, media analysis and data, and the like. Very few companies could afford to do these things themselves."

But a number of presidents warn against abdicating to the advertising agencies in policy matters. "It would be a serious mistake," says the head of a big manufacturing company, "to have a professional advertising man on the payroll who knows your business better than any outside advertising counsel could ever know it, and not take his opinion on basic questions concerning your own advertising."

Another says that if companies allow agencies to make basic policy decisions, they are "divesting themselves of a responsibility that should not be passed on to less-informed outsiders."

The question of the company president's personal involvement in advertising decisions currently is a favorite topic of luncheon conversation along Madison Avenue. A number of media and agency experts have charged that selling advertising space or time is becoming more and more a problem of dealing with the top executive in a company rather than with the advertising agency or the company's advertising manager.

Eight out of ten Panel presidents acknowledge that they sometimes get involved in advertising decisions to the extent of suggesting or changing advertising copy or art, determining which television or radio programs to sponsor, or selecting the media in which the ads will appear. One president in ten says he frequently makes such suggestions or changes, and almost seven out of ten say they sometimes do. Only two out of ten say they never suggest or change advertising copy or media.

"Actually," says the chief of a big industrial company, "the sales vice president or advertising director can't make copy or media decisions based on any real facts. But they are specialists, and their intuition developed over the years is better than mine in those areas. I never over-rule them, and I only occasionally help make a choice."

Half of the Panel members say presidents should approve the budget for each advertising program. But they are opposed three to one to presidents approving budgets for individual advertising campaigns. And they believe, by about the same ratio, that presidents should and do delegate advertising decisions to professional subordinates just as they delegate similar decisions in production, industrial relations, and other areas.

One president says, "Even those presidents who have considerable background in advertising should delegate advertising decisions just as they delegate other responsibilities. There is no reason to treat advertising differently."

"The wise president," comments another chief executive, "delegates decisions on advertising techniques and confines any comments to constructive general impressions."

Perhaps because he does sometimes make decisions about how and where to spend the advertising dollars, the company president—or his advertising chief—has become the arbiter in another advertising debate over the relative effectiveness of media or kinds of advertising.

A complete list of DUN'S REVIEW Presidents' Panel members appears on pages 150-151.

Top managements, like media representatives and advertising agencies, hold to all kinds of opinions on the subject, but there is no question about what kind of advertising the presidents are least sold on—it's purely institutional advertising. A somewhat smaller proportion of the presidents admit to serious doubts about television and radio advertising.

Success and scandal

The presidents gave their opinions at the close of advertising's greatest year. Its dollar volume for 1959 had increased by almost ten times since the boom year of 1929, and few if any business men doubted the wisdom of the old saw, "It pays to advertise." Yet, last year, in the wake of the TV scandals, advertising also came in for almost unprecedented public criticism. The word "payola" was added to the vocabulary of the man in the street, and Americans everywhere learned that FTC stands for Federal Trade Commission, a Government agency with power to enforce laws against fraudulent or misleading advertising. The commission chairman, Earl W. Kintner, leveled charge after charge at specific advertisements, although he told DUN'S REVIEW that he believes unethical advertising has not increased proportionately—there's just more advertising.

Fully 50 per cent of the chief executives surveyed concede that advertising today is marred by instances of unethical practices and exaggerated claims. The presidents—many of whom head companies turning out industrial products—say the breaches of ethics occur mainly in consumer advertising.

The majority of the presidents strongly deny that top management is responsible for any lack of ethical considerations in advertising campaigns or claims. They imply that the fault lies with the agencies and the media. The minority, who contend that some managements tend to blink at unethical advertising practices for expediency's sake, point the finger at consumer advertisers, whose competitive problems are frequently more intense.

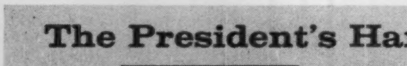
Says one president, "Industrial advertisers maintain fairly high ethical standards. I am doubtful whether the same can be said of consumer advertisers." Another president comments, "We have all been forced into this position by the intense competition, particularly in the packaged goods field."

But the head of a large manufacturing company warns that if presidents do ignore ethical considerations in the practice of advertising "they're crazy."

He adds: "Nothing is easier to avoid using than the products of a company whose claims have been found to be misleading. It is bad enough to commit marketing suicide with poor products, but it's stupid to spend money to commit it even more rapidly and surely."

JOSEPH R. MARSHALL

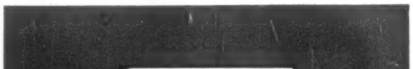
The President's Hand in Advertising



Three-fourths of the presidents believe they should not approve budgets for specific advertising campaigns.

DO NOT DISTURB

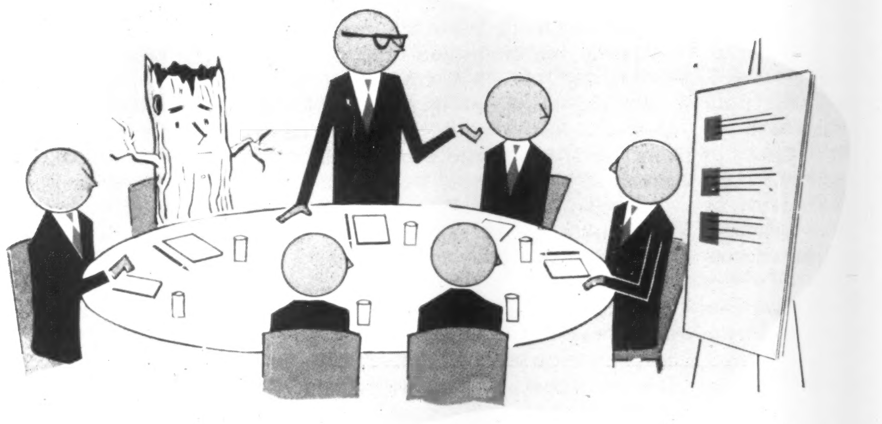
Three-fourths of the presidents believe they delegate advertising decisions as they do other decisions.



But more than three-fourths of the presidents admit they sometimes get involved in copy, art and use of media.

» *Nobody likes to talk about it, but in more and more companies, executive deadwood is being discreetly pruned.*

» *Shunning the pink-slip technique, most companies retain the problem executive but ease him out of key spots.*



How to Deal with Executive Deadwood

"A COUPLE of years ago, this company merged with another concern," says the president of a large industrial goods producer. "While the new subsidiary company's old president was still around, we pretty much kept hands off. Shortly before he retired, however, sales started to drop. New competitors and high production costs were hurting volume and profits. We appointed the heir apparent, the vice president of sales, to head the show. I told him what we wanted and left him alone. Almost a year later, no changes had been made, and none were contemplated. I asked the new president to take an early retirement. He wouldn't—so I let him go."

That's how the chief of one major company says he handled a problem of corporate deadwood—in this case, an ineffective executive who couldn't handle his current responsibilities and who should never have been promoted in the first place.

Executive deadwood is a problem that at one time or another faces every company. Take a random sample of ten controllers, treasurers, manufacturing men, or marketing executives in as many companies, and, say numerous consultants and executives, the odds are that two of them will be crackerjacks who should be running their concerns, six of them will be capable and effective managers, and two will be so far over their heads it's a mystery how they ever got where they are.

A certain number of ineffective managers, it seems, exist at all levels of management. At lower levels, the problem usually is not crucial. Most companies program operations so that few lower-echelon executives have the chance to do much harm before somebody double-checks them. At the upper levels, however, there are fewer controls. "Good Lord, if you want to talk about ineffectives, you'll find as many at the vice-presidential level as anywhere in the business," says a leading management consultant. And it's at this level that executive deadwood poses the biggest problem.

However, it's also a delicate subject. Few executives like to talk or even think about it, and none wants to be quoted directly. When it finally is faced, the problem usually is handled through the informal rather than the formal company organization.

To cut through this curtain of discreet silence and discover the current corporate practices and possible trends in dealing with the touchy problem of executive deadwood, DUN'S REVIEW interviewed consultants, top executives, and business researchers.

Broadly stated, the consensus of these experts is that small and medium-size companies generally tend to face up to the problem most directly. They'll put a man on notice and let him go if he doesn't measure up. Large companies, on the other hand, are likely to evolve elaborate camouflage techniques and go to great extremes to keep a man on. Too many companies, the evidence shows, do nothing at all unless they are forced. And despite the tough-sounding pronouncements they may put out for public consumption, most executives are softies when it comes to a situation in their own offices.

Sometimes, it takes a calamity or the introduction of new management to reveal the existence of corporate deadwood to outsiders or even to company personnel. It took Air Force rumblings about faults in the Titan missile to prod top management at the Martin Company into doing something about the reportedly faulty control and supervision which was slowing up the Titan program. It took a proxy struggle and new management at the Crane Company to shake a sleeping giant into more active competition.

The telltale signs

Many companies harboring executive deadwood hardly realize it, but the signs are often there. When a company grows, but not so fast as its competitors, when share of market declines, when innovations or research are largely "me too" imitations of industry leaders—the chances are good that there is a certain amount of corporate deadwood in key spots. And even when a company looks healthy, the trade and its competitors often know better.

Speaking of one of the country's largest chemical companies, a consultant with wide experience in the field says, "They're complacent, rolling on momentum, and heading for trouble. They are a big company. This protects them. So far a handful of researchers have kept them near the top, but they don't know how to market, they hardly know how to sell—and their best men leave."

Similarly, a shrewd, acquisition-minded president in the metal fabricating field says of a competitor, which by all outward signs is doing well, "Their production people can't control costs. In another three years we'll probably buy them out."

Ineffective executives exhibit different signs of incompetence, depending on particular company situations, but the signs are there if you know what to look for. If they are surrounded by a group of able and aggressive executives, they stick out like sore thumbs, the experts say. They are hesitant, nervous, and likely to cling to set rules and protocol. Often, they make use of the trappings of power but contribute little of the substance. "In a company where there are plenty of them, however, they are likely to be relaxed, content, and determinedly oblivious of much of the business world outside their own company," says a consultant with executive experience.

Examining the roots

But a prime question is, how do ineffectives ever get into crucial positions of power in the first place? The answer is—various ways. Sometimes it's because of growth. An executive who is extremely capable and adaptive at handling a $30 million or even a $100 million a year operation is sometimes incapable of handling a program three times as big—and such growth has not been at all unusual in the postwar years. Paradoxically, these men work themselves out of a job.

Sometimes a man is promoted by default. This can happen because ambitious men leave an organization or, in case of a power struggle, because the least controversial man gets chosen. Occasionally, it turns out that a chief executive doesn't want strong aides. Consciously or not, some strong-willed presidents wind up surrounded by weaker-willed order takers.

The chief executive's background often determines the caliber of the men he chooses as subordinates. For example, a president with a strong financial background tends to make his treasurer a mere credit manager. A chief executive with a sales background will seldom let go of marketing. In time, the philosophy arises: "You don't need a fireball to run that function. Smith did it for years—let's get someone like him again," and error repeats itself.

Often, the reason is nothing more subtle than plain bad judgment on the part of top management.

Better selection in the first place would prevent these difficulties from ever arising, but given the situation of an ineffective executive already settled in a job, companies must find some way of handling it.

Different industries handle it in different ways. In retailing, construction, and advertising, all of which are rugged fields, the pink slip if fairly commonplace. At the other end of the spectrum, railroads, utilities, and insurance companies seldom let a man go without extreme provocation. In the broad band in between lie most other manufacturing and service organizations.

In other words, one partial measure of the degree of leeway companies afford ineffective executives lies in the function the company performs. Manufacturing companies that steadily produce a fairly staple product and organizations that can count on providing a continuity of services handle ineffective executives quite gently. However, companies in a shifting marketplace or advertising or consulting concerns that, in effect, sell the time and talent of their executives, tend to lop off corporate deadwood unceremoniously.

Company size is also a factor. Smaller companies tend to get rid of deadwood, not necessarily because

Five Approaches to a Knotty Problem

Early retirement

they are intrinsically more efficient or hard-hearted, but because they can't afford to carry extra overhead.

Large companies, consisting as they do of multiple divisions, functions, and staff groups, abound with slots into which a man who did not make the grade in one job can be tried in another. A favorite solution is to move ineffectives to corporate staff spots. Usually, this is done in deference to the man's past service, but some companies find a spot in the organization for the ineffective executive because they can't risk letting a competitor get hold of him.

Commonly, men who fail in one function are shifted laterally. This can be expensive, though, if they continue to make mistakes. A number of companies have experimented with using excess executives as special consultants. Often this is combined with early retirement. Occasionally, a man is kicked upstairs, but this maneuver can be overdone. When several men were "promoted" out of the way and made vice presidents during a behind-the-scenes shakeup at a Midwestern machinery producing company, a number of able executives reportedly refused vice presidencies. They didn't want to be promoted to "skid row."

In almost all cases, an effort is made to help the floundering man "save face." "It's important that they keep their dignity," says the head of a giant electronics company.

Usually, executives who are in over their heads know it. They are often grateful for being quietly switched to a job they can handle.

The isolation treatment

But an important thing to keep in mind is that dismissal or even shifting executives to another job are measures of last resort. Unless forced to, companies try hard to officially overlook ineffectiveness in a top executive. What they do instead is to isolate the man gradually, almost imperceptibly, by slicing away parts of his job and giving them to other men to handle until sometimes his job almost melts away.

"When you find a nice, neat package of related activities divided among three or four people, the odds are it was done to compensate for inadequacies in what was supposed to be a key man," says an organization consultant. As this process is repeated, many companies develop intricate lines of authority and communication unknown to any organization chart.

Meanwhile, the question remains: Why don't company heads face up to flaws in the executive group? One reason is that it is embarrassing to the company president to admit he made a mistake in promoting his assistants. Then, too, a president is often truly unaware of weaknesses in his subordinates, especially if there is no objective measure of executive performance. Those concerns that do manage to set up relatively firm objectives for the company as a whole —and for top brass in particular— at least realize rather early in the game that an executive is not performing adequately.

However, even when they recognize such flaws, many chief executives are slow to move. Over a period of many years, tight bonds develop among company brass. "The top men in this company may butt heads, but they also built up this company from the 'bad old days' when it was nothing. If anyone tries to drive a wedge between them, they close ranks with a snap," says one ambitious second rank executive.

This explains why companies are tentative and tender-hearted in dealing with problem executives, but it has further implications.

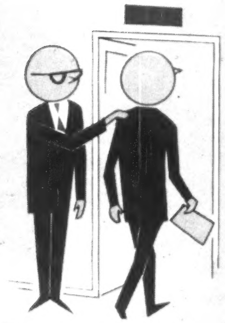
The obvious ideal solution to the problem of ineffective executives is to set up controls so that they never get promoted in the first place. Second best, in theory, is to ease such men out of the organization. However, neither of these solutions is always possible or practical.

The trend in corporate practice is not to fire ineffectives but to shift them out of key spots. For companies that don't already do so, this suggests that chief executives may need to plan enough flexibility around key spots so that inevitable errors in promotion can be easily corrected by lateral shifting of executives.

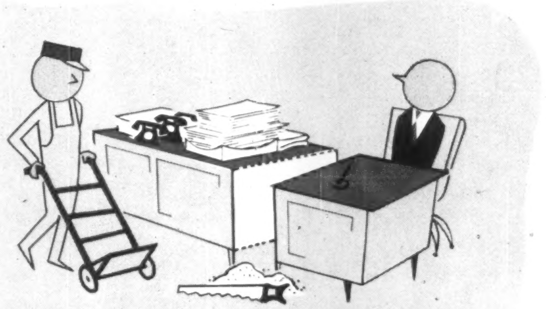
Such planning to make room for the outmoded or ineffective executive is going to be even more important in the years ahead. Over the next twenty years, companies are going to get bigger, more diversified, more institutionalized, and markets and production methods are going to change rapidly and drastically. All of these changes will mean that different talents will be required of top managers and different standards will be used to judge their effectiveness.

In other words, the executive who is successful today may be the deadwood of tomorrow. If companies are to deal with him humanely and at the same time keep him from becoming a drag on their operations, the experts warn, they will have to begin now to plan their strategy.

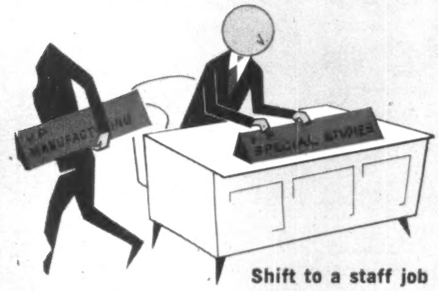
—EDWARD A. MCCREARY



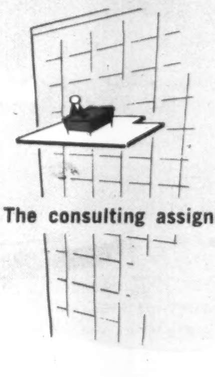
The plain pink slip



"Lightening his workload"



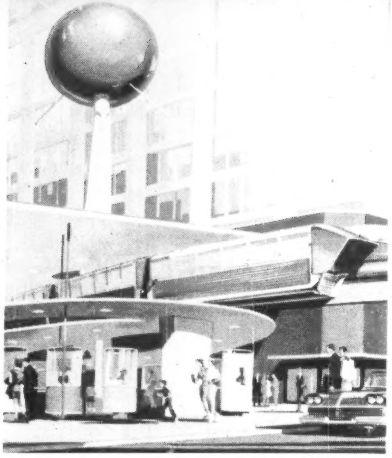
Shift to a staff job



The consulting assignment

Transportation Tomorrow: A Glimpse Ahead

Engineers are designing and building new modes of transportation that promise faster, cheaper movement of men and materials. Here's a look at some of the exciting developments that point the way to the transportation of tomorrow.



HIGH ROAD: *Lockheed is ready to build a one-mile monorail to connect a downtown Seattle terminal, which would look like this, to the Century 21 Exposition grounds overlooking Puget Sound. Monorails can be built more cheaply than rails or roads, go faster, carry more passengers per hour, and don't disrupt surface traffic.*

CARS that float on air, sleek cargo submarines, single-rail trains, speedier whirlybirds, and nuclear-powered tankers—these are just some of the new vehicles that will be moving men and materials faster and more economically within the next few years.

Some of the vehicles, which were only dreams five years ago, are already being produced, and others will be available in less than a decade.

The history of transportation industry shows that major breakthroughs like the steamboat—and now perhaps the turbo-powered hydrofoil—are quickly exploited because of the constant need to keep costs competitive. Transportation today is the third largest cost for the average manufacturer. It eats up 20 per cent of the national income, and its cost in terms of the time goods and men spend in transit has never been calculated.

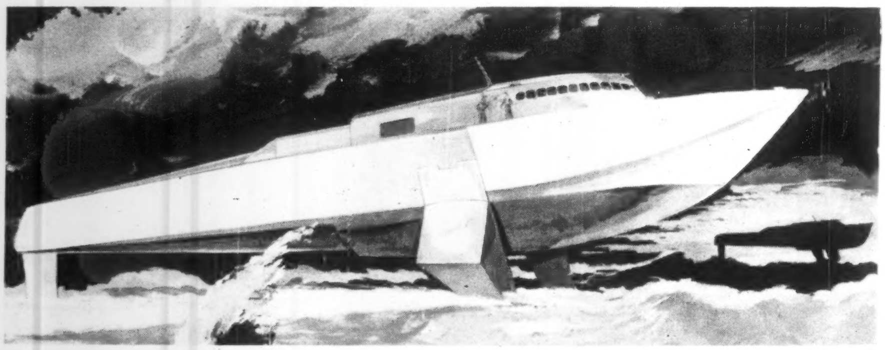
Sea transportation will get a long-over-due competitive boost from a number of new seagoing craft. Hydrofoils, nuclear-powered ships, and submarine cargo carriers are being developed in the United States and abroad. A 104-foot research vessel that will ride at speeds up to 80 knots on hydrofoils or underwater wings is now being constructed by Grumman Aircraft Engineering Corp.

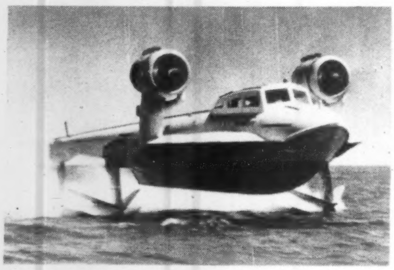
For light freight or passengers, the Curtiss-Wright Corp. has proposed an Air-Boat powered by two Curtiss-Wright C-9 cyclone engines that would carry a 40,000 pounds payload at better than 25 miles an hour.

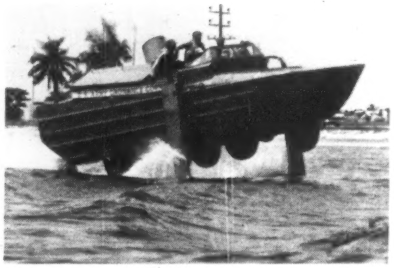
Maritime Administration officials are confident that nuclear power will become economically feasible for seagoing ships—and, some say, probably big tankers—within the next ten years. By this summer, the world's first nuclear merchant ship, the NS Savannah, will undergo sea trials.

General Dynamics Corp.'s Electric Boat Division is working on drawings and test models for a big 20-knot submarine tanker designed for nuclear propulsion. In Britain, Mitchell Engineering Limited has completed design and tank studies for a similar submarine. Other engineers have proposed submarine cargo barges to be drawn in trains by submarines.

Commercial air transportation continues to receive impetus from military research. Some of the newer developments include vertical take-off

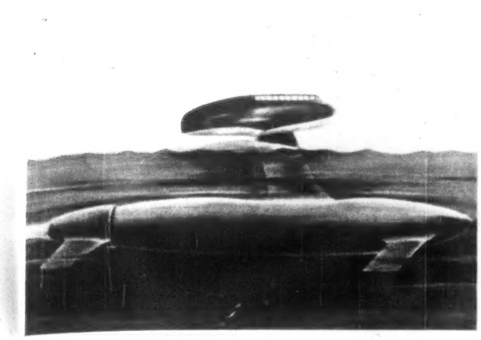


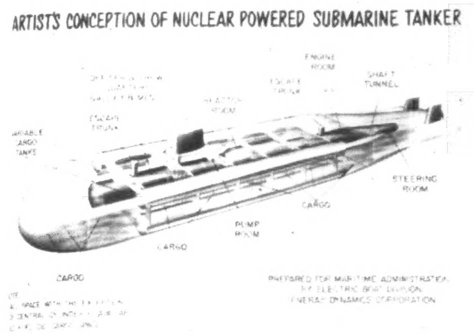


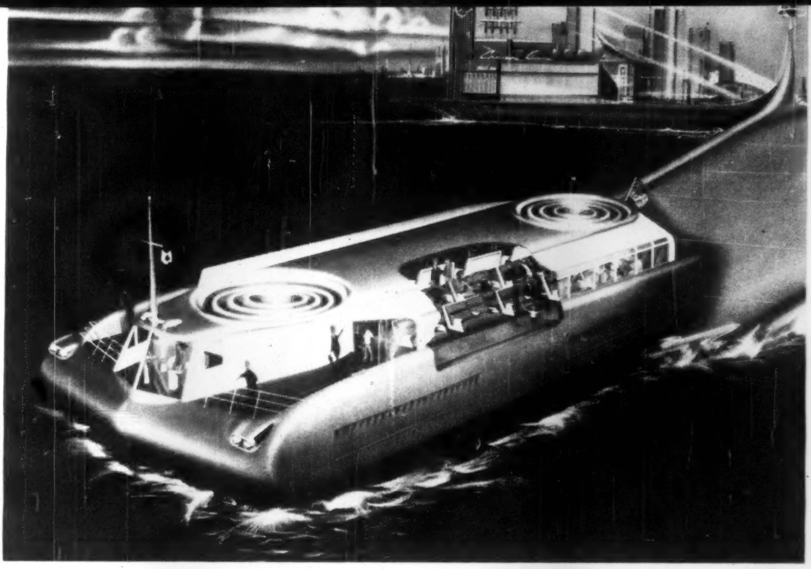


RIDING THE WAVES: *Grumman Aircraft is building a hydrofoil research vessel that will look like the design model in the top photo. A big hydrofoil could compete with planes or ships in ranges of 1,000 miles.*

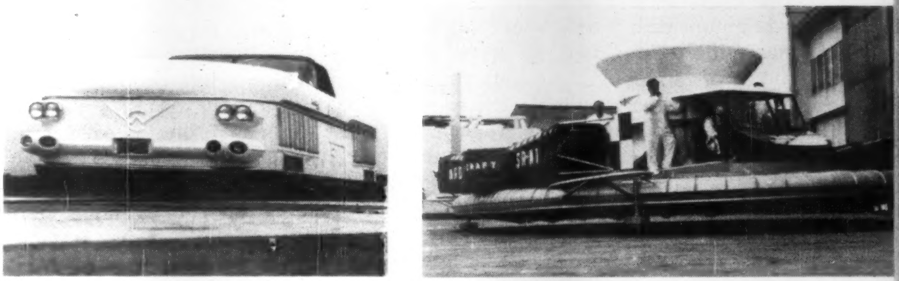
Grumman's experimental Hydrofoil XCH 4, left, has made better than 90 miles an hour. Miami Shipbuilding and Avco Corp.'s Lycoming Division put a World War II DUKW, right, on hydrofoils.




ARTIST'S CONCEPTION OF NUCLEAR POWERED SUBMARINE TANKER
ENGINE ROOM
SHAFT TUNNEL
ESCAPE TRUNK
OFFICERS & CREW QUARTERS GALLEY & MESS
REACTOR ROOM
ESCAPE TRUNK
ARIABLE CARGO TANKS
STEERING ROOM
CARGO
PUMP ROOM
CARGO
CARGO
PREPARED FOR MARITIME ADMINISTRATION BY ELECTRIC BOAT DIVISION GENERAL DYNAMICS CORPORATION



UNDERSEA TRAVEL: *Design studies underway in the United States and abroad may hasten the day of submarine cargo transportation. At speeds of 20 knots, a subsurface vessel needs less power than a surface ship of similar tonnage, and new "boundary layer" studies promise even more friction-free and economical operation. Aerojet-General has explored the feasibility of a submerged cargo vessel with a control gondola on top. General Dynamics is working on a nuclear-powered submarine tanker.*



FLOATING ON AIR: *Saunders-Roe's Hovercraft, left, and Curtiss-Wright's Air-Car, right, have demonstrated the feasibility of air-cushion vehicles that can move men and light freight. The vehicles, like the proposed Air-Boat above, ride on low-pressure air and can travel over cleared land and water and over marshes, swamp, sand, tundra, snow, and ice. Curtiss-Wright also has made designs for an Air-Truck and an Air-Bus. Another proposed vehicle would use tiny jets of high-pressure air instead of wheels.*

CONVEYER CARRIERS: *The Link-Belt Company's five and one-half mile belt conveyer, connecting the Lawrence quarry in Oklahoma with the Ada cement mill, goes under a roadway at one spot and over a railroad at another. Engineers predict that such belt conveyers will be moving materials twenty miles or more in the near future.*

vehicles which can fly at high speeds, well beyond the helicopter maximum, and larger, more economical turbo-propelled helicopters give great immediate promise. Britain's Fairey Aviation has put into the air its big Rotodyne, which climbs vertically like a helicopter in getting off the ground but is propelled like the faster autogyro in the air. The major helicopter manufacturers, meanwhile, are trying to drive down seat-mile costs by making bigger machines.

Revolutionary advances in land transportation will be brought about by vehicles which skim over the ground on a cushion of low-pressure air. Britain's Saunders-Roe has flown the Hovercraft, and Curtiss-Wright now is producing its Air-Car.

Andrew A. Kucher, engineering and research vice president of the Ford Motor Company, has long proposed use of high-pressure air and leverpads to lift vehicles a fraction of an inch above rails or similar flat, smooth surfaces. Such vehicles move with little friction and could provide transportation up to 500 miles an hour on one or two rails.

Belt conveyers have advanced from the planning stage and are now moving bulk materials over considerable distances. Experts foresee conveyer systems carrying materials cheaply up to twenty miles.

Added up, these technological advances promise new opportunities for carriers and reduced transit time and shipping costs for manufacturers and distributors. —J.R.M.

How Premiums Pay Off Today

» *The sales-boosting lure of the premium offer is stronger than ever—but only if the bait is a top-quality product.*

» *To win customers and influence dealers, industry has upped its budget for premiums to $2.25 billion annually.*

The manufacturer who had decided a premium deal would spark up his marketing effort used to have his choice of Shirley Temple milk mugs, bird whistles, or "suitable for framing" reproductions of *The Blue Boy*. Nowadays, he's more likely to take his pick of such mundane items as outdoor grills, carpet sweepers, cameras, and copper-bottomed skillets.

Aside from the occasional flash-in-the-pan success of some mad gadget, the premium offer—for which U.S. industry shells out $2.25 billion annually, according to the Premium Advertising Association of America—is centering more and more on a practical product at legitimate value.

The handwriting, say premium sponsors, is clearly on the coupon:

- More than 50 per cent of the 1,322 premiums offered last year were items for the home, according to *Premium Practice*, which keeps these tallies.
- Today's housewife has enough discount savvy to be able to sniff out inflated price claims.
- And she's destroying the maxim that no self-liquidating premium should cost more than $1 by happily mailing in $2, $3, or more for a real bargain.

Appealing to the consumer is only half the battle. Equally important is the question of whether the dealer will go along with the premium promotion. Will he set up the displays? Allocate enough shelf space? Stock enough inventory? Feature it in his ads? In fact, so important is dealer support that one of the biggest uses of premiums today is as dealer incentives.

Judiciously applied—and everyone claims that it's his competitor who is profligate with them—premiums can be an important help in:

- launching a new product
- getting consumers to come back and try a "new," "improved" formula
- creating store traffic
- inviting brand switching
- building and maintaining brand loyalty
- wresting precious store display space from competitors
- increasing dealer orders
- getting the product into new outlets

Traditionally, it's the company in a highly competitive industry where products differ only slightly that feels the greatest need to offer the consumer something extra. Last year, as always, top premium sponsors were food manufacturers, followed by soap, toiletries, and appliance makers.

However, new premium users with different objectives are coming into the picture. For instance, The Texaco Company offers the public a toy truck for $3.50 (claimed value $7.95) and a coupon available at service stations. The Ford Motor Company offers such gifts as a plated silver nut dish or a salad set "free with our compliments" to prospects who come in for Ford or Mercury demonstrations.

Savings banks everywhere are inviting people to come in and pick up any one of an assortment of household items if they'll open a $25 account and leave it there for a year.

Other premium users prefer to push their products through such programs as trading stamp, club, or party plans, the details of which are too elaborate to be covered here.

More and more companies are offering premiums to spur dealer incentive, despite howls of protest from

Eight Big Premium Pitfalls

Premium promotions lose favor with retailers if the manufacturer fails to take into account the merchant's problems and makes him shoulder more than his share of the job. The manufacturer is sure to arouse the ire of the retailer if he:

» Fails to give the retailer adequate advance information about impending promotions, leaving him stuck with an inventory.

» Uses premiums which can't be stocked in regular shelf space.

» Lets the promotion become a price football among retailers.

» Invites pilferage by using poorly secured wrap-on premiums.

» Gives the retailer the job of handing out coupons instead of attaching them to the package.

» Gives no additional mark-up for a premium that consumes twice as much shelf space as the product.

» Fails to check with the retailer to see if the premium will harm him competitively.

» Doesn't give the promotion sufficient local advertising support.

What Kind of Premium?

Two considerations govern premium selection: What will pull best for you, and what will make the dealer happy (see box on page 46.) Here are some of the most common types of premiums and the manufacturers who are using them:

Self-liquidators —so-called because the public, not the manufacturer, pays for the item. Today's self-liquidators are a far cry from the old 25 cent, 50 cent, and $1 items. Consider such offers as a coffee-maker for a box top and $5.50 (claimed value, $11.95) and an electric griddle for a box top and $10 (claimed value $24), both from the Quaker Oats Company, Chicago.

Coupon plans are long-range programs that are intended to maintain brand loyalty and usually receive little or no advertising support. Many of the more mature products, in which a premium is "expected," offer sets of silver, dishes, and pots.

Enclosures, an increasingly popular device, are a lot simpler for consumer, dealer, and manufacturer than coupons, although without the long-term pull. Enclosures aren't necessarily related to the product, as witness the ball-point pen in the Stripe toothpaste (Lever Brothers) package.

Reusable containers are welcome premiums to which retailers usually don't object, unless, of course, they're bulky or breakable. The Atlantic & Pacific Tea Company moved a lot of tea in a Currier & Ives cannister.

Banded premiums go the enclosures one better because the consumer can see and touch the free bonus. Pepsodent's hairbrush banded on the toothpaste package was phenomenally successful.

Tie-in premiums are handy if you're introducing a new product related to your old one. S. C. Johnson Company, Racine, Wis., offered a new floor cleaner with its established Glo-Coat wax and successfully promoted both. Manufacturers are also tying in with others to mutual advantage. The General Electric Company, for example, has been giving consumers Indian Head Mills sheets free with purchases of laundry appliances.

the chain stores. Dealing with an ever-shrinking number of outlets, manufacturers are frantic for shelf space in the super stores. One way to get it is to woo the dealer with a premium "bonus." Companies are making straight "dealer-loader" offers (shirts, household items, cameras, even furs for the wife) for graduated orders; packing coupons in cartons to induce store managers to open their cases sooner and oftener, and casually inserting in store displays premiums which the dealer can keep *after* he's held the promotion.

Supplying these premiums is a multi-billion dollar business in itself. Among the major companies to decide in the past year that this growing market is nothing to sneeze at are Eastman Kodak Company, Radio Corporation of America, Sylvania Electric Company, Procter Electric Company, Revere Copper & Brass Manufacturing Company, General Electric, Westinghouse Electric Company, and many others.

Their products join a formidable roster ranging from ball-point pens to kitchen stoves. Actually, the premium "industry" isn't an industry at all, but a melange of gimmick artists, middlemen, and giant corporations.

Some of these newcomers have long supplied premiums through the back door for fear of offending their dealers. Now, however, they are finding ways to maintain the delicate balance.

RCA, which has thrown its entire line—records, radio, TV—into the premium market, doesn't permit any of them to be used as self-liquidators, because this would mean an advertised price lower than their dealers'. The company's first year in premiums has, according to a spokesman, "exceeded all expectations."

No matter how many attractive items the premium user has to choose from, his merchandising problems are still numerous. Much of the success of a premium promotion depends on how clearly its objectives are defined. Merchandisers agree, for example, that you can't draw customers for an unpopular product even if you give away diamonds and dancing girls. No premium can permanently revive a doomed product. Nor can a premium singlehandedly overcome basic deficiencies in the product or its advertising or merchandising policies.

Premiums are a promotional tool, like price reductions off the label, money-back coupons, and others—each is as good as the advertising and merchandising support it gets.

Everyone connected with premiums agrees that they could use a lot more scientific market testing. In fact, as Daniel D. Kinley, vice president, McCann-Erickson, Inc., New York advertising agency, points out, not only the premium but the premium advertisement should be tested before the manufacturer launches a costly campaign.

The sad fact that premium abuses still exist, particularly in the self-liquidators, was uncovered in two recent tests. *Consumer's Union* found that only fifteen of 50 premium offers sent for constituted good value. The rest had inflated retail value claims, poor quality items, and long—up to 26 weeks—waiting time. A similar study by *Premium Practice* revealed much the same abuses.

Premiums are often under attack from retailers (see box on page 46). A. C. Nielsen Company's executive vice president James O. Peckham maintains that "In general, premium offers do not make a discernible difference in sales."

But dedicated premium users point to the returns—thousands, millions of them—each representing a new customer who may return or an old one who'll stay in the fold.

—CLAIRE TRIEB SLOTE

THE FOLKLORE OF MANAGEMENT: III

The Myth of the Wicked Politician

CLARENCE B. RANDALL

Despite the current enthusiasm about "getting into politics," in the back of his mind many a business man sees government as a nest of wily politicos and bumbling bureaucrats who couldn't honestly make a go of it in business if they tried. To Clarence B. Randall, who knows the facts of life in both spheres, this is a foolish and potentially harmful piece of management folklore. In this article, he dissects the common fallacy that business and politics won't mix—and shows how everyone would profit from more political-mindedness among business men.

For many American business men, politics is a dirty word.

And, strangely enough, for many politicians, business is a dirty word.

Both are wrong, and something should be done about it. The business man needs the skills of the politician, and the politician needs the skills of the business man. Neither can afford to call the other bad names. It is not true that all politicians lack principle, and not true that the business man responds only to self-interest. Dishonesty and selfishness are human defects that are attributes of a particular human being, not symbols of a calling. It would be my guess that they are found in about equal proportions among both politicians and business men.

Let us pause to consider what the admirable qualities are in the politician, and then ask ourselves whether those qualities have value for the business man.

First comes tough-mindedness. The politician knows what he wants and goes after it with vigor and tireless perseverance. He goes round, through, or over every obstacle and never quits so long as there remains a single chance of getting there.

Next comes flexibility. It is the goal that the politician keeps in mind. He is willing to change the method as often as he thinks it is necessary to improve his chance to advance. He is not rigid about nonessentials. He will take the half loaf if the full package of bread just isn't there. On the battlefield, he will not commit suicide for glory if the strategic retreat will bring him the ultimate victory.

He has a warm human interest in people. There is no person in any walk of life whose opinion he does not value. He listens. This is not the studied pose of an actor but an instinct, and if he did not have it, he would not be a politician. He has a sensitive awareness of all that goes on about him and is constantly readjusting his judgments of people and events in the light of new evidence or changed conditions.

The politician is, of course, articulate. He communicates constantly and has the knack of saying things that people remember. He is at his very best when saying "no," for his negative is almost as pleasant as his affirmative.

His memory is fantastic, but this is merely a result of the sharpness of his powers of observation. He pays close attention to all that others say and gets a clear image of what he sees. Awareness again.

He has loyalty. He never breaks his word, and he helps those who help him. Moreover, he is never too proud to accept help.

Of course, the successful politician has many other fine qualities too—including honor, which is basic in all walks of life—but these I have listed, which come quickly to mind, would seem to be equally desirable for the business man. It has been wisely said that no man can become a statesman unless he is first a politician—meaning that he must first get elected. With equal justice it might be said that few business men get to the top who do not manifest in their conduct the same qualities we attribute to politicians.

Take tough-mindedness, for example. Business is not a debating society; it is a field of action. The executive who does not know precisely what he is trying to accomplish will fail, for he will transmit his uncertainty to all those about him, and group ineffectiveness will be inevitable. There are two principal reasons why the vacillating executive lacks the quality of tough-mindedness: Either he does not possess the intellectual acumen to analyze a problem clearly and formulate a plan decisively, or he lacks the moral courage to put it through. When he swerves, everyone around him swerves, and soon the whole affair is in a muddle. Just as a saddle horse knows instinctively when the rider is afraid, so the morale of an entire department in any company can sink to the vanishing point if the boys sense with dismay that the boss either doesn't know or doesn't dare. Leadership is contagious singleness of purpose, radiant confidence of success for a

★ ★ ★ ★ ★ ★ ★ ★ ★

Leadership is a contagious singleness of purpose—and tough-mindedness is its base.

★ ★ ★ ★ ★ ★ ★ ★ ★

clearly defined program, and tough-mindedness is the base.

But tough-mindedness without flexibility is the stubbornness born of ignorance. Some men with really great purposes and fine ideas stalk through their business careers meeting frustration at every turn because they lack change of pace. They seem determined that if it is not to be done their way, it shall not be done at all. Deep inside a frigid exterior lies tragic insecurity. The truly confident man, he who bases his assurance on genuine humility, senses no weakness in a change of plan, so long as he still advances toward his goal. Nor does he fear to abandon the goal entirely if with earnest open-mindedness he examines the thinking of his associates and finds reasonable doubt as to its wisdom. Sheer bullheadedness, which is often mistaken for courage, builds no successful plants and sells no products.

★ ★ ★ ★ ★ ★ ★ ★ ★

The intangible values that mean so much in human relations cannot be learned by rote.

★ ★ ★ ★ ★ ★ ★ ★ ★

It is not surprising that many business men who call for more skillful diplomacy in the conduct of our foreign affairs practice so little of it themselves, for diplomacy is fairly rare in human nature and not easily defined. Yet, we all know what we are talking about when we say privately that the boss "just hasn't got it."

One wonders, too, to what extent a lack of a talent for compromise is responsible for the sad deadlocks that occur in collective bargaining between management and labor. These deadlocks often go on solely because a negotiator seizes the chance to display his ego. Usually, we appoint lawyers or economists as mediators. Perhaps we should designate politicians instead. They might find a way out when no one else can. At least, they would lubricate the frictions with common sense and be alert for compromise with honor.

As to the sensitivity toward human values which the politician displays, we simply cannot live without it in business. Not only for the good of the company but for our own peace of mind, we simply must make a go of it with the man who works alongside us. We do this by building our relationships on each other's good points and not letting the other man's limitations close our eyes to his strong qualities.

Some men never succeed in making such adjustments. They either live in a constant state of guerilla warfare with those about them or clam up in silent and morose isolation. Such an individual is a cancerous growth within an otherwise normal organization and must be removed as soon as discovered, no matter how painful the surgery. Quite often he has a brilliant mind, and there are many spots, such as research, where he may work alone and contribute much. But he is out of place where teamwork is involved.

As to the quality of being articulate, which all top politicians possess and which many business men lack, I am not clear whether a man becomes a politician because he possesses it or whether he acquires it because it is indispensable to his calling. Whichever hypothesis is correct, I can only wish that all executives had it too. No man can exercise vigorous leadership who does not have the gift of transmitting thought, both by the spoken and the written word. No plan is valid, no program significant, if the man who conceives it is unable to communicate it to others, and this is a function which he cannot delegate.

Memory, as such, is an attribute to which I give a low rating. I am always suspicious of the man who can infallibly quote statistics, and who takes pride in correcting others on dates and other trivia. The important thing about data is to know where to find it when you need it. It's not necessary to make a filing cabinet out of your brain. The highest function of the mind is the exercise of judgment, and there is no correlation between a capacity to reason and factual memory. But sensitivity to one's surroundings and awareness of the impact upon our own thought and action of that which occurs around us is of top priority.

Loyalty in business is simple honesty. To hold fast to friendship, whether in business or in politics, is an elementary expression of high character. It would be highly worthwhile even if it were not good business, which it always is. Only those unfortunate men who have no scale of moral values to which they hold fast reject it.

Then there are two other characteristics which are not the special property of either politicians or business men but which when practiced by either group greatly enhance the effectiveness of politics in its best meaning.

The first is a lively sense of humor—not heavy-handed buffoonery, or coarseness, or ill-timed satire that hurts, but a deft instinct for the infectious chuckle. How many times in daily business life there comes a tense moment when tempers are running high and irreparable damage can be done by an angry outburst that a wise man with ready wit can save the situation by a spontaneous flash of humor! Most effective of all is the man who dares to laugh at himself, for no one can fight him when that is his posture.

Finally comes the heaven-sent instinct which some men have for performing little acts of personal consideration and kindness for those about them without thought of recompense of any sort. This may be as simple as remembering that a man's child is ill and asking for it correctly by name, or as important as offering an unsolicited loan that you know is desperately needed. It is the spirit of the thing that counts, for the intangible values that mean so much in sound human relations, whether in public life or in the shop or the office, lie chiefly in the realm of the spirit. They cannot be learned by rote or bought with money.

★ ★ ★ ★ ★ ★ ★ ★ ★

No man can exercise vigorous leadership who lacks the gift of transmitting thought.

★ ★ ★ ★ ★ ★ ★ ★ ★

Why then, if business men possess these fine qualities in equal measure with politicians, and if the exercise of these personal attributes brings equally profitable results to both, should they regard each other with suspicion? Would it not be better if they learned to pool their abilities and work toward a strong economy and a better government?

More specifically, why doesn't the

business man overcome his distaste for "dirty politics" and throw himself into the political arena and personally work to correct the abuses of which he complains? Revolutionary as this about-face would be, it would electrify the country.

One simple, vital change is all that is needed: the creation of a new climate for political activity within business organizations. Let the men at the top set a new tone, so that seeking and holding public office is honorable instead of dangerous for individual employees, and the revolution is on.

It is too late for the men of my generation to take the plunge themselves. They are frozen in by their inhibitions, but the young men are ready. Those between 25 and 45 years of age, sobered by war and alarmed at the uncertainties that lie ahead for their children, are champing at the bit. All that they ask is to be turned loose and given their heads.

This is radical, but it will work. It will certainly help to clean up politics, if top management will go all out. They must make it absolutely clear that freedom to participate in political activity, on company time when proper, extends to every level of the company and applies impartially to members of both parties. Let the assistant safety engineer in the plant be just as free to serve as township road supervisor as the vice president is to be a member of the Board of Education. And let Republican officers honestly encourage effort by Democratic precinct workers.

My generation abandoned the political arena to the professionals by default. It can now be recaptured by younger men if those presently at the management controls will give the go signal. END

EXECUTIVE JOBS: A Seller's Market

On the higher executive levels, demand is massive, supply limited, salaries pushing higher. Most in demand: marketing and engineering management men.

COMPANIES across America are seeking, finding, and wooing top executive talent as seldom before.

The result is a squeeze on the supply and a continuing trend toward higher salaries, bonuses, stock options, and deferred payment plans.

Leading concerns in the fast-growing business of executive recruitment report a surge in demand in 1960 for upper-level executives in almost all categories.

"The year got off to a very big start," reports Handy Associates, Inc. "It's been heavy for all sorts of top management people."

President William A. Hertan of Executive Manpower Corp., which has likewise been surveying the market, found demand "much greater than it has been in the past three years."

The big problem, of course, is not just locating the "right" man for the top job. He must be persuaded to pack his bag and move.

Studies have shown that half the executives in the nation may be willing to move to greener fields—provided the fields are decidedly greener. But far fewer are actively dissatisfied today.

The Chicago-based recruitment firm of Heidrick and Struggles reports, "It is becoming more difficult to acquire fully qualified executive personnel because of the high level of industrial activity and accompanying favorable salary and incentive plans."

Such things as bonuses, merit raises, and stock options have been increasing, and salary levels climbed steadily throughout 1959.

This is the general shape of today's executive market, as reported by the leading recruiters of top executive talent:

- **Marketing and engineering men:** Numerically, the biggest demand for top talent continues in two critical fields, marketing and engineering management. "The great demand has generally been in those two areas," reports Heidrick and Struggles. "We think the demand will continue at a high level for some time."

The Struggles firm keeps an *Executrend,* a tally of demand in the executive market as shown by newspaper display advertisements in major population centers. In the last three months of 1957, the firm found demand for marketing and engineering management men was 50 per cent greater than the demand for financial executives and twice that for manufacturing directors.

Executive Manpower Corp. found the biggest needs in the fields of marketing, engineering management, and production.

- **Manufacturing executives:** Both Heidrick and Struggles and the Executive Manpower Corp. report that demand for production men lags considerably behind that for the top two categories.
- **Financial managers:** Throughout 1959, there was a big increase in the limited demand for top financial men—an indication that companies were getting set for bigger business ahead and preparing to move into new areas. Edmond F. Wright, a partner in Wright-Porter, Inc., observes that this is a common pattern as the economy moves into an upswing.
- **Industrial relations men:** Here, too, there was a major increase in demand.
- **General administration executives:** The demand for general administrators fell off in the last months of 1959. Numerically, demand for general administration men was less throughout the country than demand for any other category of executives. However, it was reported picking up early this year.

—J.R.M.

SPECIAL REPORT TO MANAGEMENT

Industry's Plant

Big Changes Ahead

Needed: Profit-Producing Plants

To get in trim for the competitive times ahead, industry faces a gargantuan modernization job. The time dimensions of this assignment and the unusual approaches that companies are already adopting to cope with it, are the subject of a new and revealing DUN'S REVIEW survey. How will automation affect plant design? Which facilities are most in need of attention right now? What changes in the work environment are paying off quickest in efficiency and improved employee relations? **52**

New Guide to Plant Location

Here's a roundup of the basic facts you need to know about the 48 states when you begin digging out information on possible locations for your new plant. **77**

New Trends in Supporting Facilities

It takes more than an efficient factory to assure a good profit to the manufacturer these days.

Here's the latest on locating, designing, and building research, engineering, distribution, and repair facilities. **85**

Wooing Employees with Better "Extras"

Food and entertainment facilities now make some plants a "home away from home," ease recruitment, boost morale. **111**

Preview of Tomorrow's Plants

Industrial architects and engineers reveal their thinking about new trends in factory design that could help to shape the new plant you may be planning ten years from now. **119**

INDUSTRY'S PLANT

Needed: Profit-Producing Plants

THOUSANDS of new plants will spring up on the industrial landscape as companies gear up for the decade ahead—but most of the production gains will result from extensive modernization of existing capacity.

This is the principal finding in a new survey by DUN'S REVIEW of the state of industry's plant facilities present and planned (for details, see page 54).

Most companies are certainly not short of production capacity to meet the projected demands of the next few years. But there is a marked shortage of efficient, *low-cost* capacity—the kind that determines a company's success or failure in the marketplace. In order to stay competitive with other members of their industry, most companies will have to modernize completely substantial proportions of their present production facilities within the next five years.

Generally, plans for major modernization programs are more frequent among medium-size companies (see box, page 53).

Industry's current determination to boost its low-cost capacity in the next few years through extensive programs of modernization will almost certainly bring a new peak in plant and equipment expenditures before the decade is far along. This spending would be further encouraged if pressure on Congress from both business and the Administration succeeds in bringing the passage of new legislation to revise the current tax regulations which pertain to depreciation schedules.

Currently, plants are being designed primarily to accommodate the new automated and semi-automated production equipment that may be available by the time the plant is completed.

Management's increasing sophistication in the technical aspects of plant design is helping to avert some costly problems. For example, no company that understands the critical importance of setting the dimensions of the plant module (the basic unit of measurement, based on the size of the plant bay) will fail to work as closely as possible with the architects on this problem, considering in detail space requirements of the production equipment to be installed. Actually, today's highly automatic equipment often makes the closest cooperation in this area a necessity. And even with conventional machines, the penalties of "leaving all that to the architects" can be severe. Too small a module, of course, spells trouble in installation, operation, and maintenance—but, less obviously, too much space can hamper efficient materials handling.

No longer is the plant conceived as an imposing structure that will serve the company's needs for the next 50 years. The demand now is for flexible buildings that can be easily expanded and allow space for the rearrangement of equipment.

Management is discovering that built-in flexibility is the best way to

This Special Report to Management was prepared under the direction of Thomas Kenny, assisted by Melvin Mandell

Many companies are now planning for big increases in their plant capacity to meet the expanding demands of the new decade. A new DUN'S REVIEW *survey of 197 manufacturing companies reveals that management is under pressure to come up with new solutions to the problems of designing, locating, and constructing plants. This five-part Special Report to Management pinpoints the new trends that are affecting management's decisions for the years ahead.*

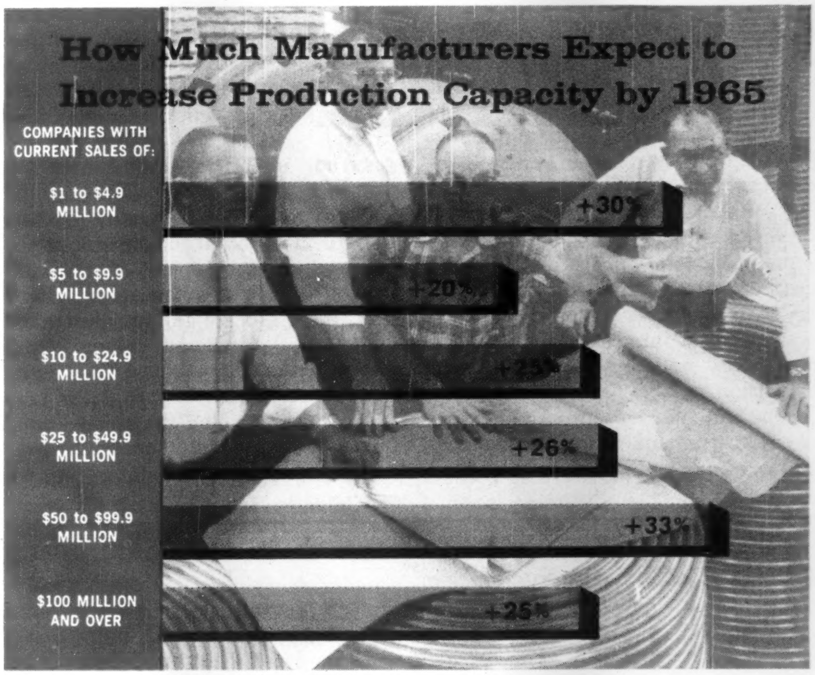
avoid obsolescence, which can be the greatest single cost in a plant construction program. Because of the rapid technological advances being made today, a building which is completely modern at the drawing-board stage may be obsolete by the time its construction is completed.

Mainly, companies are providing for flexibility by planning for wide bays (about 60 feet), using curtain wall construction that can be easily dismantled, allowing ample head room (about 14 feet), and building in utility lines that can handle larger volume.

A good example of the way provision is made for future expansion can be seen at the new Bissell, Inc., plant near Grand Rapids, Mich. Power facilities in the plant were designed with an add-on feature. Room was left in the power plant area for an additional boiler to handle a plant addition half again as large as the existing plant.

Industry's future plans for expansion also show up vividly in the amount of land being acquired at new plant sites. For instance, the just-completed plant of the Dayton Rubber Company near Springfield, Mo., occupies only six acres out of a total of 62.

The trends in factory design and construction that became clearly evident during the 1950's will be even more pronounced in the decade ahead, according to the DUN'S REVIEW survey. Here are the major trends spotted



Growth Goals: The 197 companies surveyed by DUN'S REVIEW are planning sizable increases in production capacity by 1965. Most of the increase is expected to result from modernization of present-day plants. For instance, in the companies with sales from $1 to $5 million, modernization, on the average, will provide 66 per cent of new capacity. For companies with sales from $5 to $10 million, the comparable figure is 55 per cent, and for those with sales from $10 to $25 million, it is 50 per cent. The same percentage applies to those with sales from $50 to $100 million and more. Among companies with sales from $25 to $50 million, modernization is expected to provide only 40 per cent of new capacity.

in the replies from 197 companies:

- Brighter, more spacious production areas for both safety and esthetic reasons. Generous use of color.
- Much more use of air conditioning throughout the plant—not merely the amount required by the process but comfort air conditioning in general production areas.
- More flexibility in factory design through the greater use of curtain wall construction.
- Standardized and prefabricated buildings (the producers prefer the term "pre-engineered") that can be erected quickly.
- More and better facilities for employees as plants continue their push out of the cities.

The one-level plant, which has become almost the universal pattern for new plants in many industries, will probably continue to gain in popularity. However, new techniques in materials handling and automated production may result in renewed interest in multi-story production buildings. In fact, a sizable minority of the surveyed companies (41 out of 197) actually look for such a development in the forseeable future. Manufacturers of instruments and similar products are most interested in the use of multi-story buildings for their future expansion.

One out of every two of the surveyed instrument makers expects to make greater use of the multi-level plants, compared with one in three of the food processors, one in four of the paper makers, one in seven of the makers of transportation equipment, and only one in fifteen of the machinery manufacturers.

The development of vertical conveyers for the movement of lightweight parts and the spread of miniaturization in product design are important factors in the renewed interest in the multi-story plant.

More than any other factor, automation will determine the design of tomorrow's plants. Whether industry has more or fewer plants, larger or smaller production units, one-level or multi-level structures will largely depend on the nature of automated production and the materials handling equipment that is available.

The majority of the companies surveyed think that automation will require consolidated rather than dispersed production facilities. They point to the need for large production runs in order to work off the cost of the automated equipment as rapidly as possible.

In some companies, automation is expected actually to reduce the investment in bricks and mortar. A thorough-going modernization and installation of up-to-the-minute production machinery make it possible to get far more production out of the same square footage of plant space. However, these older buildings must have wide spans and good ceiling clearances to accommodate new automated equipment.

Here's a behind-the-scenes rundown of what manufacturers expect will be the present and future impact of automation on plant construction programs and the actual design of plants:

- Automation has brought greater consolidation of our production of individual products, but not much difference in the size of our plants.—*Vice president, New York manufacturer of electrical equipment*
- We are just beginning to feel the effects of automation in our industry. Much progress will be made in the next few years, and it is bound to affect future plant size and design.—*President, Omaha packing company*
- Improved instrumentation, more centralized controls, and automated equipment have resulted in greater compactness and simplicity in our designs for new plants. —*Vice president, Chicago cement producer*
- The coming of automation has already affected our plant construction program, by delaying the need for new plants. In the future, the effect will probably show up in the size of each facility. —*Production superintendent, Wilmington, Del., chemical producer*
- Automation will probably result in greater consolidation of facilities by types of products and provide better means of segregating different products into separate decentralized operations. —*General works manager, Chicago producer of glass products*
- Automation has already brought the need for additional buildings in our company. Processors of seasonal food require large inventories. To keep up with our automated equipment, palletizing in the warehouses is needed to reduce handling and shipping costs. But a palletized warehouse

---

About This Survey

This new survey of industry's plant facilities is drawn from detailed replies to a four-page questionnaire completed by 197 manufacturing companies, which fell into the following size groups:

Sales in 1959	Number of Companies
Under $5 million	4
$5 million to $10 million	7
$10,000,001 to $25 million	39
$25,000,001 to $50 million	49
$50,000,001 to $100 million	38
Over $100 million	60

Of the total replies, 31 came from manufacturers of non-electrical machinery, 28 from producers of electrical machinery, 22 from chemical companies, and twenty from food producers. There were fifteen from primary metals producers, thirteen from producers of stone, clay, and glass products, and nine from paper manufacturers.

The remainder came from various industries, including manufacturers of transportation equipment, instruments, textiles, and coal and petroleum products.

Most of the questionnaires were answered by top management men. Presidents, executive vice presidents, and vice presidents of companies accounted for 106 of the replies.

Thirty general managers and production managers completed survey questionnaires. Sixteen came from treasurers, corporate secretaries, and controllers. The remainder were from middle management executives, mostly bearing manufacturing responsibilities.

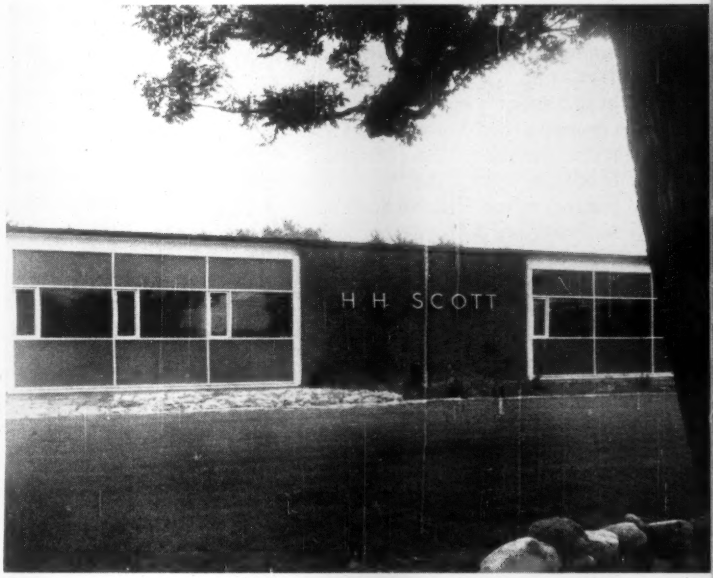
Do-It-Yourself Pays Off

By doing most of the design and construction chores itself, a small company saved 15 per cent of the cost of a new plant

H. H. Scott, Inc., which produces hi-fi components for the do-it-yourself market, has gained many important benefits by practicing what it preaches. By drawing on the abilities, hobbies, and spare time of key staff members, the company saved both time and money in putting up its new production plant in Maynard, Mass.

At the same time, the company reports that the executives gained a greater sense of participation in the new plant and in company planning generally. Management points out, too, that when the time comes for further expansion, the same group that benefited from the planning experiences (and from having to live with their own mistakes) can tackle the problem again with excellent results.

A general contractor and architect were employed, but they were responsible for only the basic structure and utilities. Engineering, designing, decor, and other subcontracting were handled by company people, from the president to the assistant chief engineer. The novel approach was based on the belief that more would be gained by having company executives learn the principles of plant layout than by having architects and consulting engineers learn company operations.



DO-IT-YOURSELF: Management helped design this plant.

---

will hold only three-fourths to seven-eighths as much as a warehouse that is filled in the older way. —*Vice president, New York food processor*

As the result of the development of automated equipment and centralized control of operations, a number of the surveyed companies expect their future plants to be much more compact in design and layout than those constructed in recent years. They expect to build plants around fewer and larger units of automated production equipment, which will be under centralized control. Also, they look for the consequent reduction in needed manpower to cut the space requirements for employee service facilities.

Here's how some of the surveyed companies visualize their plants in 1970:

- Because of the precision and control necessary on individual products, we look for an acceleration of the trend to self-sufficient manufacturing areas within the same building. —*Director of manufacturing, Florida producer of electronic equipment*
- For our future plants, we are looking into the possibility of having separate buildings for sheet metal working, machining, painting, plating, assembly, and engineering operations. —*Vice president, large diversified producer of electrical equipment*
- We are planning to make greater use of wood and non-corrosive metals and materials to reduce maintenance costs. —*Vice president, Michigan food producer*
- We are planning for larger storage and service areas, as compared to actual manufacturing area and a more functional design for the entire plant. —*Vice president, North Carolina textile producer*

To a large extent, both the shape and size of a new plant are determined by whether or not warehousing takes place at the factory and how much space it will require. On the basis of the survey replies, it appears that in most companies the need for warehousing space in future plants will increase. Reasons: the spread of high-speed automated production equipment, the growing practice among many companies of carrying inventories for both customers and distributors, and the preference for adding to their own warehouse space rather than making increased use of public warehousing.

At the same time, new techniques in physical distribution such as piggybacking, containerization, and air freight for routine shipments (see DUN'S REVIEW, June 1959, page 60) should enable many companies to reduce their total stocks of finished goods on hand. And the change in the very nature of the company warehouse over to the so-called distribution center (see page 97) may shift finished stocks from the plant out to regional points.

In providing space for warehousing, companies have generally had two choices: to modernize existing buildings not originally constructed for warehousing, or to put up new buildings specifically designed for warehousing. Among the 197 surveyed companies, almost three times as many companies prefer to construct new buildings specifically designed for warehousing rather than attempt to adapt existing buildings.

This preference for specially designed warehouses is particularly marked among food producers. A large proportion of the machinery manufacturers, however, find that converting existing buildings is more economical for their purposes. Of course, it's in the packaged goods industry that some of the most remarkable strides toward the push-button warehouse are being made.

Since industry's warehouses are changing both in function and design (see page 97), the cost of warehouse space varies considerably from company to company and from industry to industry. For instance, in the food industry, the surveyed companies report that warehouse space varies from 5 to 80 per cent of the cost of production plant space. The mean cost is 20 per cent of the cost of production plant space.

The producers of stone, clay, and glass products have warehouse space costs ranging from 5 to 25 per cent of production space costs, with the average at 10 per cent. For machinery producers, the range is from 5 to 75 per cent, with the mean at 25 per cent.

Although the production line remains the center of management's attention in most industries, in the last few years there has been increased emphasis on such non-production facilities as research labs, technical centers, distribution centers, and other supporting facilities.

These supporting facilities are more up-to-date than the production plant in one-third of the companies surveyed, about on a par with the plant in half of the companies, and somewhat lagging in only one-sixth. And it is primarily in the smaller one-plant company that the research facilities match the production plant in general efficiency, age, and design.

The surveyed companies report that as a general rule their research labs are in much better shape than their warehousing facilities.

Reflecting the views of many of the respondents is the remark of a spokesman for a large diversified Michigan company: "Old multi-story buildings are being converted to warehousing. Our research and development labs are being expanded twice as fast as our production facilities because we find that we must run fast in this direction just to keep even."

Management in many companies is coming to recognize that there may well be a maximum size for manufacturing plants, both in terms of economics and in terms of administrative capabilities. Seventy-eight of the survey respondents report that they seem to have run up against a maximum economic size for a plant in their industry.

A much larger proportion of those in the $25 million to $49.9 million (sales) group report having encountered the problem of maximum economic plant size than has management in the other size groups. This may be because many companies in this size group attempt to supply growing markets by expanding the size of the plant rather than adding new facilities.

Although there is wide variation in plant size limitations even within industries, the maximum size of 500 employees is most often reported.

A manageable size

The primary reason given by the surveyed companies for any limitation on the plant size is managerial control, but the factor of disproportionate increases in overhead beyond a certain size level is also frequently mentioned.

Among some of the companies surveyed, small scattered plants are preferred to larger units, in order to avoid complete shutdowns of production in the event of labor problems.

A number of the companies indicate that the size of their individual plants is determined only by the ability of the market to absorb their products. This, in turn, depends upon the companies' ability to get to the market with products at competitive prices. Says the vice president of a large salt producer: "Salt is salt, and transportation economics limit our market range and therefore the size of the plant."

Some companies want to preserve the atmosphere of the smaller plant for reasons of employee morale.

Says the vice president in charge of manufacturing for a major producer of cosmetics and related products: "We limit the size of plants to a maximum of 750 employees, not for economic reasons but simply because we want our people to feel that they belong and are not just numbers on the timeclock."

Here's a sampling of other policies about the size of individual plants:

"The maximum size of 2,500 employees is determined by the ability to handle personnel problems, as well as to keep a limit on our community responsibilities in small towns. Also, it keeps communication problems from getting out of hand."—*Vice president, New England manufacturer of electrical equipment*

"We aim at between 2,500 and 3,000 employees. Beyond this point, production control and factory administration lose day-by-day contact with details and with operating supervision. Below this point, too, the overhead staff becomes disproportionate, and lower volume does not permit the utilization of high-speed production equipment."—*Vice president of a major manufacturer of office equipment*

"Plants of about 2,500 employees can be product-oriented, thus providing greater motivation and allowing a higher degree of specialization in all technological areas such as en-

(continued on page 60)

Where the Increased Production Capacity Is Coming From

Big boosts in production capacity are now being planned by many of the 197 companies in the new DUN'S REVIEW *survey. Here's a rundown of the gains that are being planned in various industries:*

MANUFACTURERS OF	Increase in capacity	Range of increases	Percentage of the increased capacity resulting from: Modernization	New plant facilities
Food products	20%	10- 80%	50	50
Paper products	35	20-100	40	60
Chemicals & allied products	30	10-100	25	75
Stone, clay & glass products	20	5- 75	40	60
Primary metals	35	10-150	50	50
Machinery (non-electrical)	25	5-100	50	50
Electrical machinery	40	10-200	40	60
Transportation equipment	50	20-100	50	50
Instruments & related products	75	10-100	80	20

Forecast for the 60's

THE CLIMATE IS RIGHT IN PENNSYLVANIA

Traditionally Pennsylvania has been famous as a great industrial state, with natural resources unmatched anywhere. But in today's highly complex, highly competitive economy, such natural resources must be complemented by other factors in the new formula for industrial growth and expansion. Today in Pennsylvania a new concept of community and Commonwealth cooperation makes the business "climate" increasingly appealing to companies seeking new opportunities for progress and profit. This trend has resulted directly from these integrated plant location advantages:

100% Financing

Complete financing for Lease-Purchase of a new plant, with interest as low as 2% and deferred amortization on half of the project cost is available under the "Pennsylvania Plan." You specify plant construction details or choose one of the plant "shells" ready for completion. You select either purchase, lease-purchase or straight leasing, all available at highly attractive terms. And you have the further advantage of hand-picking the type of community that best suits your requirements.

Improved Tax Climate

Check the facts on Pennsylvania's present tax structure. Local property taxes are among the lowest in the nation. Machinery, equipment, and inventories are exempt from property taxation. There is a manufacturer's exemption to the state capital stock and franchise taxes. There is no state personal income tax. Production materials and manufacturing machinery are exempt from the sales tax. Manufacturers find a favorable and competitive tax situation in Pennsylvania.

Plant Location Services

A staff of experts is immediately available to help you make a complete and comprehensive plant location survey. These engineering and economics specialists are prepared to serve industry, engineering firms, management consultants, and industrial realtors with fully detailed plant location data, covering every conceivable factor that could enter into your decision on a new plant site. For full details send for "Plant Location Services"—a free booklet covering these available facilities.

FOR MORE EFFICIENT, MORE PROFITABLE PRODUCTION

In increasing numbers, business executives mindful of the challenge of the 60's have literally "taken another look at Pennsylvania." They have liked what they have discovered again—variety, abundance and easy availability of production materials and components; power and fuel; a surplus of industrial manpower; rail, highway, air, river and ocean-going transportation; overnight or one-day access to major national market centers. And they have been impressed with the practical program of local community and state cooperation. So much so, in fact, the past four years have produced this amazing "growth" picture:

389 NEW PLANTS **391** RE-OPENINGS OF IDLE PLANTS **788** PLANT EXPANSIONS

Write or call for free copy of "Plant Location Services" pamphlet, or for details on 100% financing.

Get the facts now about your better future in Pennsylvania

Pennsylvania Department of Commerce

South Office Building 723 State Street • Harrisburg, Pa. Phone: **CEdar 4-2912**

INDUSTRY'S PLANT

"All of a Sudden Came All That Travail"

The president of a small manufacturing company lets DUN'S REVIEW *in on the unexpected problems in moving to a new location.*

WE were a small company with large problems, and, typically, we thought our problems were somewhat larger than anybody else's. We were increasing sales and profits every month. Gradually, we snookered into every loose inch of our multiple-story building, and we got outlandishly overgrown. So for two or three years, we debated the obvious necessity of moving. We looked around at various sites to see if we could buy some more property, but nothing seemed to work out.

We looked for vacant land, and finally—thanks to the good offices of the power company—we stumbled across a gorgeous piece of land near an expressway. We bought it, and we were very happy with it. Then we got to thinking that if we put up a building of the type that we had in mind, it probably would have a tendency to increase land prices around the neighborhood. We thought we had better protect ourselves unless we wanted to have a cat-and-dog hospital, or some such, move in next to us some day. So, since we hadn't made any financing arrangements to build our building, we proceeded to buy up more land. We went through 50 or 60 different real estate transactions, acquiring 50-foot front lots that had been sold back in the Roaring Twenties, and we put together twelve more acres to give us a hunk of approximately 30 acres.

Casing the town

There wasn't too much other industry to compete with us for labor—the utility nearby used a different kind of worker. We were also very pleased with the character of the community, and since there were eight other plants to share the tax load, we weren't alone and defenseless, so to speak, if new schools and the like should become necessary, as they undoubtedly will. We didn't look too much into taxes, because we feel they are bound to go up in most areas anyway. The tax base looked good.

We bought the land and then went out to raise the money to build the building. It was a very interesting experience. Everybody clapped us on the back and said, "You have a fine company, but your history is about two or three years too short. We don't know if you can continue to do what you have been doing." In fact, they doubted it. So, we got nice warm smiles and no money to speak of. We were turned down by some of the nicest people you could imagine. But, finally, we found a receptive ear at a commercial bank in Chicago.

The financing problem staggered us. All at once we were going to drop a tremendous amount of our wealth below the line—and when you are borrowing money, that's not so good. However, despite these almost overwhelming obstacles, we went ahead and built a building. During the course of the construction, interesting things started to happen.

First, it rained and snowed and sleeted while we were putting on the roof, which literally fell in. It is very dismaying to walk around your new plant and see the roof caved in. But this happened early enough so it wasn't too disastrous, although for a while I was quite alarmed about it. We got the building up recently and on time. Then, just about dead on our budget, it came time to move out of our old plant and—like the fellow who built a boat in his basement—we had to knock down a wall to get out. Incidentally, we also had to knock a wall out of the back of our new plant to get in.

The worst of it

Then, all of a sudden, came all that travail, which I am sure I couldn't have imagined ever taking place. Among other things, it was essential that we sell our old building, but the market for old buildings collapsed about that time. We had a patent suit that was getting quite tense, and we had an influx of fast-talking competitors and a fantastic contractor defalcation.

Then we changed a lot of our old methods of manufacture. We also found we couldn't communicate very easily in the new plant. All of a sudden we weren't breathing down each other's necks. We couldn't just run around the plant on foot, so we had a complete breakdown administratively.

Our purchasing had been somewhat informal. We didn't want to buy a lot of stuff and then have to move it, so we thought we'd get right down to the quick on inventory. Well, it didn't quite work out that way. We had to install a teleprinter system, and our backlog of orders became so great that the re-orders and back-orders on orders that had never been shipped were just amazing. We had only two people in the order department, and the teleprinter paper at one time reached from one end of the office to the other before noon. We found that we were reading Monday's teleprinted messages on Wednesday, so we had to jerk out the teleprinter system.

Our competitors were making hay, and our customers somehow took violent exception to our neglect of their problems. Things were extremely tense. We even came across a new problem, which we have since learned to expect as an almost daily occurrence. Every itinerant union organizer on his way to the ball game in Milwaukee would see our shiny new plant and would think we had lots of prospective customers for him. So we had to learn to deal with these fellows too.

Basically, we are delighted with our move. We did surmount the problems. Still, this doesn't purport to be a success story. The final chapter isn't written, but we have put our bank on notice that they will be backing a $100 million company within ten years.

Moving to a new plant may not be the path to immediate cash return, but I believe it's the road to survival and dynamic growth.

smart truck users choose NationaLease

the PREFERRED way to lease trucks

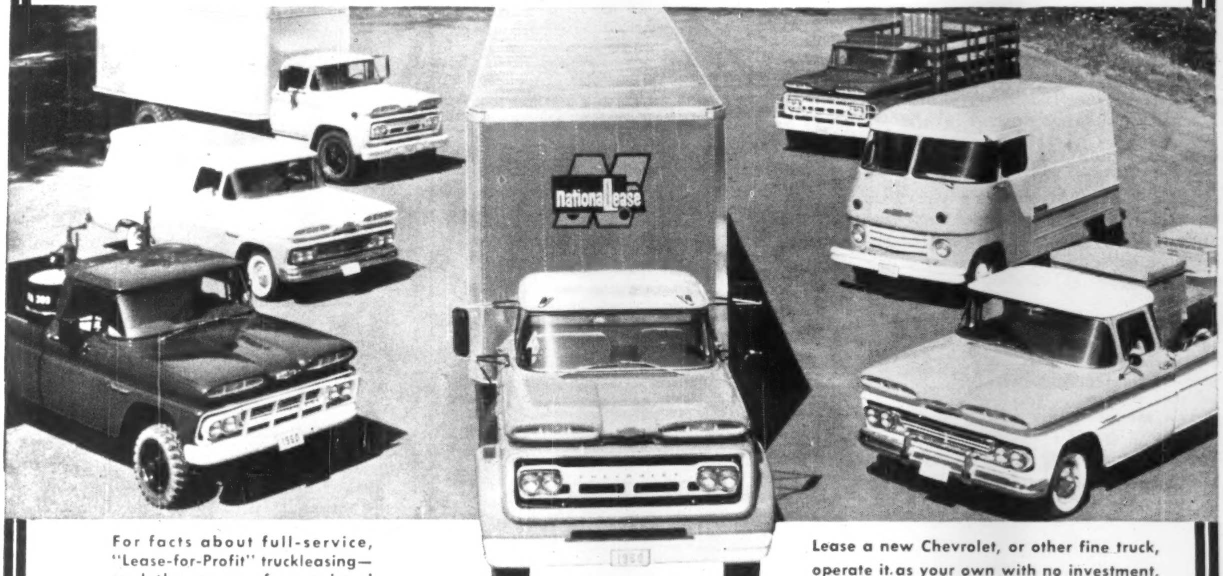
because it's national in experience and service ...local in costs and controls

NationaLease supplies everything but the driver at flexible, local-level costs. On-the-spot management provides highest efficiency; full-service, one-invoice truckleasing—the LEASE-FOR-PROFIT way.

NationaLease service doesn't add to your cost . . . it saves. Saves the capital and management time you now spend on trucks so you can put yourself—and your money—back into your own business.

LEASE... for Profit

Forget trucks! Whether you lease a single truck or a fleet your local **NationaLease** firm will take them over and relieve you of all concern with capital tie-up, procurement of properly engineered equipment, garaging, paperwork, insurance, licensing, upkeep—and hundreds of invoices. Your driver operates the truck as if you owned it—and you have a single budgetable invoice. That's **NationaLease** full-service truckleasing!



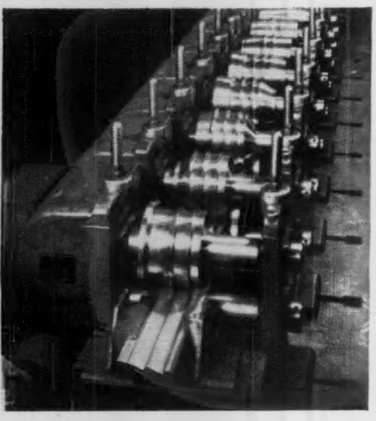
For facts about full-service, "Lease-for-Profit" truckleasing—and the name of your local NationaLease firm, write:

Lease a new Chevrolet, or other fine truck, operate it as your own with no investment, no upkeep.

NATIONAL TRUCK LEASING SYSTEM

Serving Principal Cities of the United States, Canada, and Puerto Rico

23 E. JACKSON BLVD., SUITE: DR-3 CHICAGO 4, ILLINOIS



Yoder Roll-Forming Equipment mass-produces shapes accurately, economically

Yoder Roll-Forming Equipment, even with part-time operation, can effect significant savings in many metal working applications and industries. Shapes, simple or complex, can be quickly and economically produced the Yoder way from a wide variety of flat-rolled coated or uncoated stock . . . in thickness up to ¾ inch . . . in speeds up to 50,000 feet per day.

Yoder engineers flexibility and precision into metal forming operations. For example: many basic shape modifications, such as coiling, welding, notching, ring-forming, perforating, and cutting to length can be simultaneously accomplished with little or no additional labor cost.

Yoder also makes a complete line of Rotary Slitters and Pipe and Tube Mills. Profit from Yoder's years of engineering and service experience, contact your local Yoder representative or send for the Yoder Roll-Forming Manual.

This fully-illustrated 88-page book clearly discusses every important aspect of Yoder Roll-Forming Equipment and methods . . . it's yours for the asking!

THE YODER COMPANY
5531 Walworth Avenue • Cleveland 1, Ohio

ENGINEERING YODER MANUFACTURING
COLD ROLL FORMING MACHINES

INDUSTRY'S PLANT

gineering development, production techniques, and inspection."—*Manufacturing manager, major producer of electronic equipment*

"We prefer units from 600 to 800 employees. Above this, the plant gets weighty with overhead, people repeat the overhead functions already handled at headquarters, and the local manager loses grasp of facilities."—*A major chemical producer*

"Our limit for any one plant is about 6,000 employees, and we also limit the number at any one location to 5 per cent of the total community area population to avoid oversaturation in any area."—*A major manufacturer of office equipment*

Among the surveyed companies with more than one plant, those expecting increased decentralization of

Shortage of Land Affects Plant Design

One of the strongest new design trends—positive provision for expansion of facilities—is being brought about by the growing scarcity of good land available for construction.

Land use is now considerably more intensive. The new structures are being placed as close to property lines as permissible, leaving room for maximum expansion.

Knock-out panels for doorways, expansion-type fourth side walls, location of shipping and receiving facilities near what will eventually be the center of the structure, provision for utility extension—these are all devices that have been coming into increasing prominence in industry's approach to plant layout and design.

The most expensive expansion insurance is taking the form of an unusually high overhead span to permit the eventual erection of a mezzanine, plus larger footings and reinforced columns to support another floor.

Ralph S. Crumme,
vice president,
Abbott, Merkt & Company,
industrial engineers

MODERN INDUSTRY BOOKS

Your up-to-date guide *to efficient supervision*

This book provides a practical training course in job management and man management.

With its help, you can develop supervisors for your company who are thoroughly familiar with the basic principles of good management and how to apply them to everyday problems.

SUPERVISION IN BUSINESS AND INDUSTRY
by ROBERT D. LOKEN
Assistant to the Publisher, Life Magazine
and EARL P. STRONG
Director of Management Development, Civil Service Commission, Washington, D.C.
314 pages, 5½ x 8¼, $3.50
A MODERN INDUSTRY BOOK

Written in simple language from the standpoint of the supervisor, this book covers, step-by-step, the duties of the line and staff supervisor in organizing, planning, and controlling production—from evaluating personnel requirements, training the new employee, and delegating responsibility, to handling job breakdowns, grievances, orders, and so forth.

A Working Manual of Public Relations Techniques

This book gives you tested-by-experience material to help you solve your most difficult public relations problems. It brings you the best thinking of 34 recognized authorities—more than have ever discussed public relations within the covers of a single book.

YOUR PUBLIC RELATIONS
Edited by GLENN GRISWOLD
and DENNY GRISWOLD
with chapters by 32 other experts in the public relations field
644 pages, 32 illustrations, 6⅛ x 9¼
$7.50
A MODERN INDUSTRY BOOK

Here is a practical working handbook which for the first time applies the actual case history approach to public relations. Each chapter includes step-by-step case examples to show tested public relations methods that have proved successful.

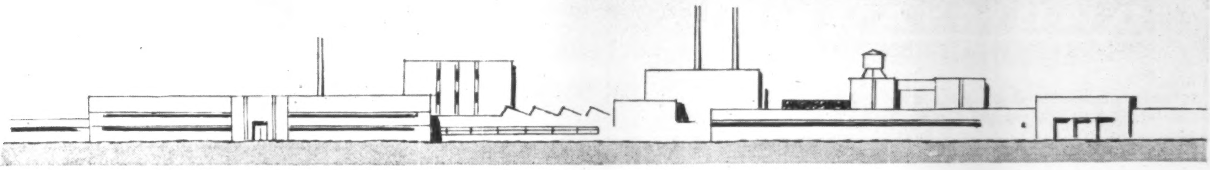
With this handbook at his fingertips, any executive can plan his entire public relations program with confidence.

Order from Book Department
Dun's Review and Modern Industry,
99 Church Street, New York 8, N.Y.

debt-free

INDIANA

FIRST for 10 Years in Industrial Growth



why?

Why was Indiana first among all major industrial states in per-capita construction for the 1950-1959 decade?

Why was Indiana first among *all* states in per-capita construction for 9 of those 10 years (and 58% ahead of the runner-up state in the past 4 years)?

Why did Indiana have nearly 3 times its per-capita share of new construction in those 10 years (6.9% of total U.S. construction with only 2.5% of total U.S. population)?

Why was Indiana's portion of total U.S. construction over 3½ times as great (6.9%) as the average for all other states (1.9%)?

Figures from Bureau of Census, U.S. Department of Commerce

because . . .

Indiana Has No State Debt! Indiana's Constitution *forbids* bonded state debt. Our new industries *can't* be billed for yesterday's obligations!

Only One Indiana Tax-Rate Increase in 28 Years! No corporation tax! *No* manufacturer's tax! *No* sales or value-added tax! *No* net-worth or penalty tax! *No* "use" or "nuisance" tax!

Indiana Is the Center of Everything: manufacturing and marketing center, population and warehousing center, shipping and distribution center!

Mail Coupon Today
FOR FREE BROCHURE
"Why So Much Industry Prefers to Locate in Debt-Free Indiana"

DIRECTOR, INDIANA DEPARTMENT OF COMMERCE
333-D, STATE HOUSE
INDIANAPOLIS, INDIANA

Dear Sir:
Please send me a copy of your new 40-page brochure.

NAME____________________

ADDRESS____________________

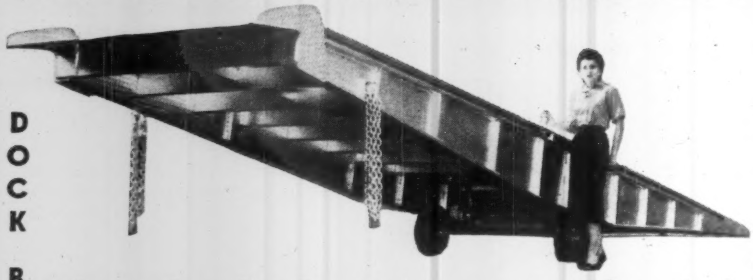
CITY________________STATE________

SEE a demonstration by a specialist
TROUBLE-FREE PAPER TOWEL CABINET
OUT OF ORDER
OUT OF ORDER
WESTROLL TOWELS

for FREE demonstration or literature address:
WEST CHEMICAL PRODUCTS INC., 42-17 West St., Long Island City 1, N. Y.
Branches in principal cities • IN CANADA: 5621-23 Casgrain Ave., Montreal

WEST CHEMICAL PRODUCTS INC

lite-line Mobile Yard Ramps



DOCK BOARDS

PALLET DOLLIES

The dock that goes to the job will cut your loading costs

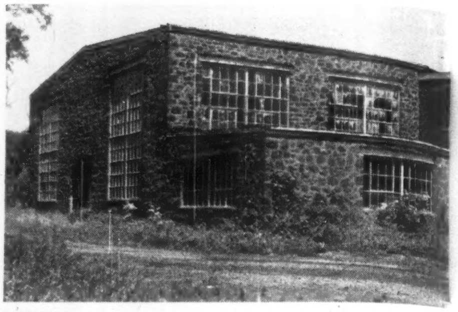
A Lite-Line Yard Ramp moves easily into position, to load or unload truck or rail car.

SAFE • RUGGED • LIGHTWEIGHT

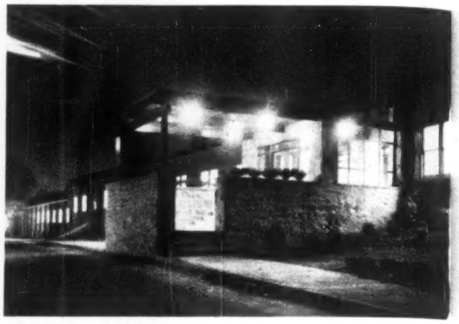
For complete information write to

lite-line
MAGNESIUM DOCK EQUIPMENT

LITE-LINE METAL INDUSTRIES
DIVISION OF COPPERLOY CORP.
1312 Enterprise Ave.
Cleveland 35, Ohio



BEFORE *it was converted into a modern research center for the Electric Storage Battery Company, this 100-year old bleachery building in Yardley, Pa., had been abandoned and unused for years.*



AFTER *a complete remodelling that included a refacing with new stone from the original quarry, the attractive building was ready for occupancy just six months from the day planning began.*

their production facilities during the next five years outnumber by more than two to one those who foresee consolidation of their production facilities. Nearly half of the 173 multiplant companies look for very little change.

While the modern factory has been being reshaped completely in both appearance and setting in recent years, startling changes have also been taking place in the work environment.

A breakdown at any point on an automated assembly line can be much more costly today than ever before. To the extent that improvements in the working environment can prevent fatigue and boredom and enable the man at the machine to avoid costly mistakes, companies are finding they are justified. Of course, as industry is learning, a pleasant work environment also can be highly effective in attracting the skilled employees who will be in noticeably short supply in the years ahead.

And one of the most important reasons for the upgrading of the plant environment in the past few years has been management's assumption that money put into such improvements is reflected in higher productivity.

Says architect Ralph Stoetzel: "Most plants have a highly decorative reception area, and the offices, too, are given careful consideration in terms of colors, finishes, attractive and comfortable furniture. When the same consideration is extended to the production area of the plant, employee morale, operating efficiency, and output jump right up."

Building Overseas

The growing importance of world markets is pointed up by the plans of many of the companies in the DUN'S REVIEW survey to locate plants in foreign countries. Sixty-five of the companies already have plants in other countries, and 64 others are currently planning to construct such plants overseas in the course of the next five years.

Only one in fifteen of the primary metals producers has foreign plants, compared with one in two of non-electrical machinery manufacturers, one in three electrical machinery makers, one in five food producers, and five out of seven instrument makers.

New overseas plants are planned by one out of two producers of primary metals and of machinery (both electrical and non-electrical), compared with one out of nine food producers, one out of three makers of transportation equipment, three out of four chemical manufacturers, and five out of seven instrument makers.

The leading location choice among the 64 companies planning foreign plants is South America, which was mentioned seventeen times. A close second with sixteen mentions was the United Kingdom, followed by West Germany, Italy, Australia, and Belgium.

MAKE EVERY SQUARE FOOT COUNT
MAKE EVERY SQUARE FOOT COUNT
MAKE SQUARE FOOT COUNT
MAKE FOOT COUNT
RAYMOND

with RAYMOND®

NARROW AISLE
Electric Tiering Trucks

Why build or lease additional warehouse space? Make use of the storage space you are **not using** by putting the Raymond narrow aisle trucks to work in your present warehouse.

Raymond narrow aisle trucks operate in 6 foot aisles* . . . 4 to 6 feet narrower than counterbalanced trucks require. Every square foot of floor space Raymond saves means additional cubage . . . up to 50% more storage. Available in 2,000, 3,000 and 4,000 lb. capacities. 12 or 24 volt models. Get the complete Raymond narrow aisle facts . . . send for Raymond bulletin today.

* for exact aisle width, ask your Raymond representative to survey your operation.

The RAYMOND Corporation
4692 Madison St., Greene, N.Y.
Please send Electric
Tiering Truck bulletin

NAME TITLE
COMPANY
STREET
CITY STATE

SALES FOLLOW THE RAILS

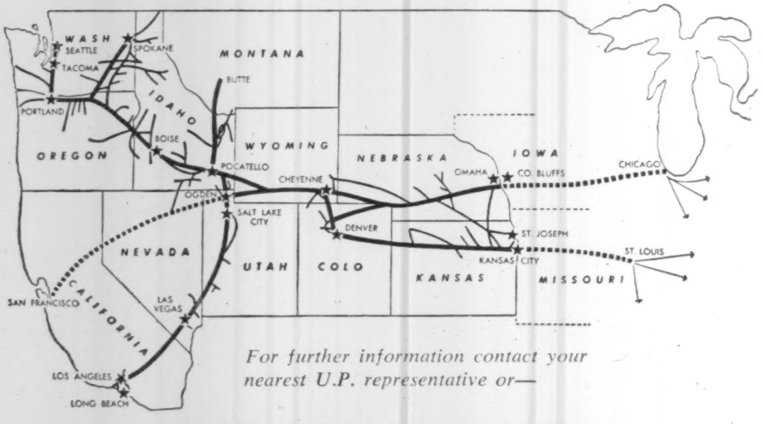
The railroads paved the way for industrial progress in the West and that is as true today as it was in the 1800's.

Distribution opens the channels for sales. And efficient, economical transportation is a big factor in distribution.

That's where Union Pacific enters the picture. When you have a plant located on or near U.P. trackage you are in a position to benefit from a freight transportation service that is unsurpassed.

That has been our contribution to industrial progress; to build and constantly improve our service to shippers.

So we suggest that if you have need for a plant in a western location, you give serious consideration to a tract in the "Union Pacific West."


WASH
SEATTLE
SPOKANE
TACOMA
PORTLAND
MONTANA
BUTTE
IDAHO
OREGON
BOISE
WYOMING
POCATELLO
NEBRASKA
IOWA
OMAHA
CO. BLUFFS
CHICAGO
CHEYENNE
OGDEN
SALT LAKE CITY
DENVER
ST. JOSEPH
NEVADA
UTAH
COLO
KANSAS
KANSAS CITY
ST. LOUIS
MISSOURI
SAN FRANCISCO
CALIFORNIA
LAS VEGAS
LOS ANGELES
LONG BEACH

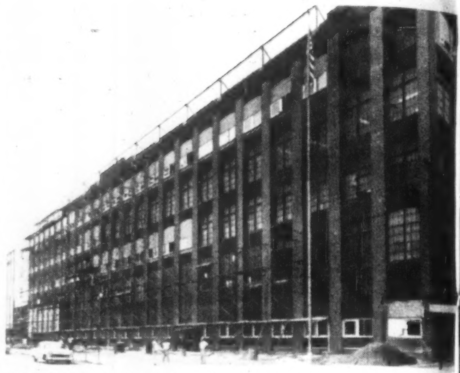
For further information contact your nearest U.P. representative or—

Industrial Development Dept.

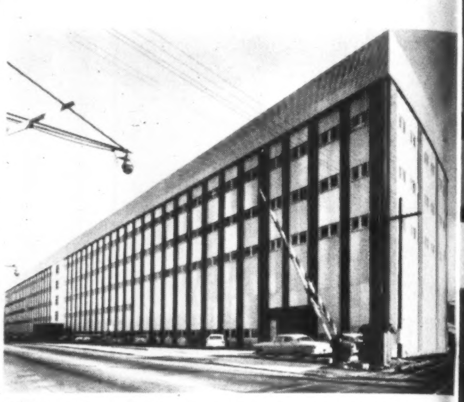
UNION PACIFIC

Railroad

OMAHA 2, NEBRASKA



BEFORE *it had its face lifted, the American Viscose building near Philadelphia looked as drab and old-fashioned as many other 50-year old production plants.*



AFTER *the aluminum refacing was completed, the plant projected a bright contemporary image. Maintenance costs were reduced, and employee morale was boosted.*

However, apparently some companies are discovering that their best efforts to improve the plant environment are going unrecognized by rank-and-file employee. Says the vice president of a company that will remain nameless here:

"The blue-collar employee is hardly ever inclined to say that these improvements in working conditions are worth anything at the bargaining table. In contrast, the white-collar worker does evidence appreciation.

"When a company dresses up the interior of its plant, the blue-collar worker is told, in effect—that is, if he is told anything at all—'We are doing this because it is good for you, so enjoy it.' Management doesn't sell its important improvements in the work environment as something that can directly benefit the employees through reducing eyestrain, cutting fatigue, lifting their spirits, and so on. Nor are the color preferences of those who will be spending their working

DITZLER
DITZ-LAC LACQUER
DAL 8150
FROST WHITE
MARBLE WHITE
DITZLER COLOR DIVISION
DITZLER
DITZCO ENAMEL
DQE 31217
BIRCH GRAY
DITZLER COLOR DIVISION

BURROUGHS ACCOUNTING MACHINES SAVED 100% OF THEIR COST IN 18 MONTHS FOR DITZLER COLOR DIVISION, PITTSBURGH PLATE GLASS COMPANY

The scene: Detroit, headquarters of this manufacturer and worldwide distributor of handsome automotive finishes. **The jobs:** payables, receivables, payroll, general ledger, sales and commission analyses, stock records. **The equipment:** Burroughs Accounting Machines which replaced a punched card system. **The results.** in the words of Chief Accountant J. R. Howells: "Work flows with a maximum of speed and a minimum of operator decisions. The machines are so automatic that switching from job to job is just a matter of flicking a knob. The machines saved a solid 100% of their cost in 18 months."

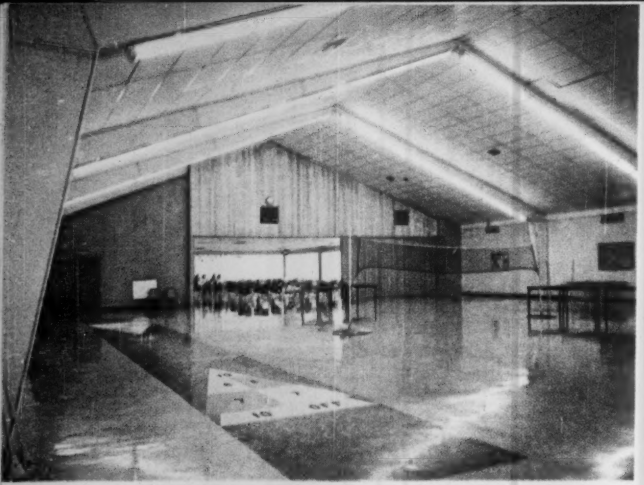
Burroughs—TM

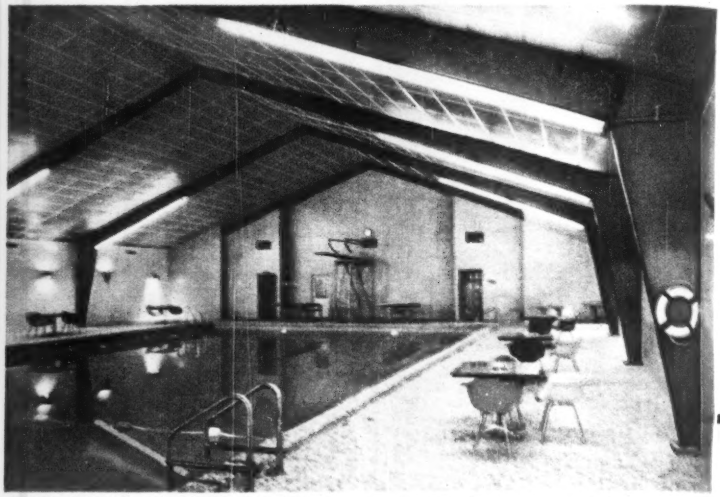
Burroughs data processing equipment ranges from accounting machines to giant electronic computer systems. It's supported by outstanding systems knowledge and known for outstanding results. For details, action — and results — call our nearby branch now. Or write Burroughs Corporation, Burroughs Division, Detroit 32, Michigan.

Burroughs

Burroughs Corporation

"NEW DIMENSIONS / in electronics and data processing systems"





Architect: Zay Smith & Associates, LaGrange, Ill.; Designer: Norman Steenhof

VISITORS ASK

"What does it cost to work here?"

This bit of whimsy reveals a happy truth about Flick-Reedy Corp., a large air and hydraulic cylinder manufacturer near Chicago. It is a wonderful place to work. This 222,000-sq.-ft. Butler building and surrounding grounds include:

—A magnificent swimming pool for employees, their families and the community—complete with poolside tables and chairs in rich decorator colors.

—An auditorium-gymnasium where employees can enjoy shuffleboard, volleyball and ping pong during off hours.

—Lagoons stocked with fish, where anglers can while away leisure hours. The lagoons, like the pool, are also part of an ingenious water supply system which, combined with Butler fire safety, gives Flick-Reedy an extremely favorable insurance rate.

—Light, pleasant production and office areas. Butler's great structural strength permitted the installation of glass between these areas rather than heavy load-bearing masonry partitions. The effect is both a visual and psychological atmosphere of all working toward a common goal.

Does all this cost a fortune? No! Frank Flick, president, says the savings in initial construction, heating, insurance and maintenance afforded by the Butler system of building helped them get many outstanding features that would have been beyond reach with any other type of construction.

Your Butler Builder (see Yellow Pages under "Buildings" or "Steel Buildings") can build this kind of plant for you. Ask him about the new Butler buildings, with two superior wall and roof systems—now available in six beautiful colors. Ask about Butler financing, too.

BUTLER®

BUTLER MANUFACTURING COMPANY 7417 East 13th Street, Kansas City 26, Missouri

Manufacturers of Metal Buildings • Equipment for Farming, Oil Transportation, Outdoor Advertising • Contract Manufacturing

Sales offices in Los Angeles and Richmond, Calif. • Houston, Tex. • Birmingham, Ala. • Kansas City, Mo. • Minneapolis, Minn. • Chicago, Ill. Detroit, Mich. • Cleveland, Ohio • Pittsburgh, Pa. • New York City and Syracuse, N.Y. • Boston, Mass. • Washington, D.C. • Burlington, Ont., Can.

hours in the remodelled areas very often even asked for."

Thanks to automation, most authorities agree, within ten years the office and production areas of a plant will resemble one another much more than they do today.

The upgrading of the plant environment is being reflected in a change in the workday attire of many employees in the shop. Companies report that after completion of a newly brightened, colorful plant interior, frequently employees abandon the blue

"Give Me Land . . ."

In the past fifteen years, land suitable for almost any kind of business has been growing scarce. Most companies wish they had acquired some neighboring piece of property when it was available. Most companies wish they had more parking space and had planned the use of their land better.

In the fifteen years ahead, good business property will become increasingly difficult to obtain. Because of tightened zoning ordinances, industrial land areas—especially those with rail sidings—will be more severely restricted. Increased automobile ownership will require more parking space per employee. The one-story plant most advantageous for automation will require more land area.

The lesson for management now is twofold: first, acquire more than adequate land for your projected business needs; second, increase your effective land use by developing master plans for your whole plant area and by building in accordance with them.

As far as plant facilities themselves are concerned, any long-term inflationary trend would make a piece of factory a more desirable possession for the long term than a piece of a depreciating dollar.

—J. Irwin Miller
chairman, board of directors
Cummins Engine Company

CINCINNATI . . . a city of stability and vitality
KROGER

The $10,000,000 Kroger building, 1959 addition to the downtown Cincinnati skyline

Going up... $571,000,000 worth in 10 years... in the "City closest to America"

If you've been thinking about a new plant, branch, or headquarters office in terms of a strategic midwest location, you've probably already turned up plenty of interesting facts about the Cincinnati Area.

Solid city. Diversified industry. Center of a 500-mile circle that accounts for about one-half of the nation's business. Fine workers with proud skills. The kind of culture, schools, and easy-access suburban living that make management employees happy to move here, stay here.

You wouldn't expect such advantages to be overlooked. They haven't been. In the last ten years, 185 major manufacturing firms have built plants in the Greater Cincinnati Industrial Area. Nearly 800 firms have expanded plants, built new offices or additions. Total added investment: over $571,000,000. Total added to payrolls: 55,000 people. Total added to annual pay checks: $215,000,000.

Pretty good evidence, don't you think, that this is the kind of area in which you will find the best possible growing climate—in the 1960's. Could we talk about it some more?

For complete and confidential *information about the Greater Cincinnati Area relating to your own specific problems and needs, write Mr. Ernest S. Fields, President, The Cincinnati Gas & Electric Company, Cincinnati, Ohio.*

The Cincinnati Gas & Electric Company
The Union Light, Heat and Power Company
Serving homes and industry in the Greater Cincinnati Area with an adequate and dependable supply of gas and electricity.

Why Cadillac Gage MICROHONES* Drilled Bores in Hydraulic Units

Since 1940, Cadillac Gage Company has been known for the quality of its high precision gages. Cadillac's production "know-how" in obtaining close tolerances has in recent years led to diversification in precision products.

From Gages to Tank Turrets

For example, Cadillac has developed and are now producing, for a prime contractor, hydraulic systems that control gun elevation and traverse of gun turrets on military tanks. In these units, geometric tolerances in millionths of an inch and a controlled surface finish are mandatory for smooth, dependable performance. That is why sleeve bores in control valves and lock valve bodies are Microhoned.

Efficient Stock-Removal and High Precision

Because Microhoning is both a stock-removal and a precision finishing process, Cadillac engineers specified only two machining operations for the sleeve bores: drilling and Microhoning. Sleeves (hardened to 63 R"C") are Microhoned to generate roundness and straightness within 20 millionths of an inch tolerance over the full length of the bore. Also, in removing from .008″ to .010″ of stock, Microhoning consistently produces a surface finish of 4 microinches rms.

MMT-PE

Simple collet-chuck fixturing permits fast, easy accommodation of various workpiece sizes. A Micromatic-designed tool speeds tool changeover.

Higher Quality — Lower Scrap

Every Microhoned bore is checked on a precision air gage . . . this 100% inspection insures highest quality control. Mating spools are selectively fitted to the Microhoned sleeve and clearance is held to between .00002″ and .0001″. Every sleeve and spool assembly must withstand a rigorous 3,000 psi leakage test. Scrap rate is practically nil.

With Micromatic equipment, Cadillac has substantially increased production; they control surface finish within closer limits; consistently generate specified geometric accuracy: and practically eliminate scrap. How Microhoning accomplishes these results is explained on facing page.

PRECISION PRODUCTION THROUGH MICROHONING
MICRO MATIC

**Registered U.S. Pat. Off.*

MICROMATIC HONE CORP.
8100 SCHOOLCRAFT AVENUE · DETROIT 38, MICHIGAN

All Under One Roof

Pointing up the growing recognition of facilities planning as a key management function is the announcement that, for the first time, a trade show will be built around it.

The first Industrial Exposition and Congress, scheduled for December 12-15, 1960 at the New York Coliseum will bring together the men in industry who are responsible for decisions on new plant or modernization programs and who provide both the materials and the services involved with such programs.

Convention meetings will cover such subjects as planning new construction, financing, modernization of older buildings, new types of construction, layout of equipment, construction materials, selection of sites, and so on. The various exhibits will tie in with these themes.

collar for neater, more stylish attire.

Bright, pleasing decor does increase maintenance costs. A grease smudge on a pastel pillar or wall is much more noticeable than stains on the traditional dark gray surfaces. Also, the conduit lines for utilities that are painted in vivid hues—primarily for quick identification—show their coatings of grease rather readily.

But many companies are finding the reduction in accidents in the bright, colorful plant more than offsets the additional maintenance expense.

Although there are few precise measurements of productivity gains from substantial improvements in decor, informal estimates range as high as 20 per cent. But since the revamping of the plant environment is seldom done without major changes in equipment layout, modernization, or methods, it is almost impossible to trace productivity gains which are due entirely to improvements in decor.

Says vice president Thomas Buckley of the Vendo Company: "When you clean up, you almost always do other things too—rearrangement, layout, and so on—for as you start cleaning up, you see things that should be done."

The steady increases in the light level in today's plants—it has been doubling every decade—have been an important spur to the sweeping changes in plant decor. For many of the things that went unnoticed before—grimy ceilings, dark floors, mottled walls, and so on—stand out vividly in the sunlight.

Not only do the lighter finishes for floors, ceilings, and walls add to the efficiency of the lighting, but they prevent the eyestrain that results from frequently shifting the gaze from light to dark areas.

Sometimes there are other unexpected complications in improving the plant environment. For example, after new, brighter lighting was installed in one section of a large plant, the plant manager was swamped with requests for transfers into that department.

Working conditions have long been discussed at the bargaining table, but recently worker demands for changes

An industrial realtor sounds off about management's approach to plant location:

Executives for many organizations have come to us for help in finding land on which to locate a plant. When we ask them what size their plant is to be, they really don't seem to know. Nobody has sat down and figured out just how big the new plant ought to be.

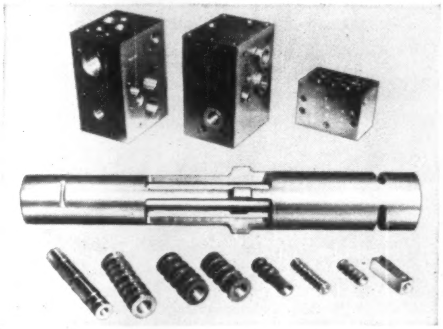
The average company that is at all dynamic has to expand about 4 per cent a year in order to stay even. Most companies putting up plants know they have been growing, but they don't seem to realize that they will need a plant at least 40 per cent bigger in ten years.

Generally, the company that is going to build buys the land and then begins to figure what the construction will cost. They don't understand that there ought to be some kind of a relationship between land cost and plant cost. Most of them haven't made a detailed market analysis of the industrial land market and the influence of the land market on their decision.

The fact is, most plant selections are based on whim or caprice and not science.

How Cadillac Gage MICROHONES Drilled Bores in Hydraulic Units

Here's how Cadillac Gage Company uses just drilling and Microhoning to secure higher production, reduce costs and obtain high accuracy in producing precision bores for hydraulic units that control gun elevation and traverse of gun turrets on military tanks.



This representative range of sleeves and other hydraulic components include both soft and hardened steels.

MMT=pE

Microhoning Bores in Hard Steel

Following the drilling operation, bores are Microhoned in at least eight different sizes of sleeves that are hardened to 63 R "C". Bore diameters range from [illegible]0" to .875" and in length [illegible] 5.50". From .008" to [illegible] stock is removed in an average Microhoning cycle of about two minutes. A surface finish of four microinches, rms, is consistently obtained while generating roundness and straightness within 20 millionths of an inch tolerance over the full length of the bore. Also, because the free-floating Microhoning tool follows the neutral axis of the drilled hole, the bore location remains unchanged.

Microhoning Bores in Soft Steel

Another component of these hydraulic units is a cylinder whose bore is 1.625" in diameter and 19" long. Because the maximum stroke of the Hydrohoner machines being used is 15", the cylinder is turned end-for-end during the Microhoning of the bore. Following a deep-hole drilling, Microhoning removes from .012" to .015" of stock in generating a controlled surface finish and correcting geometric inaccuracies.

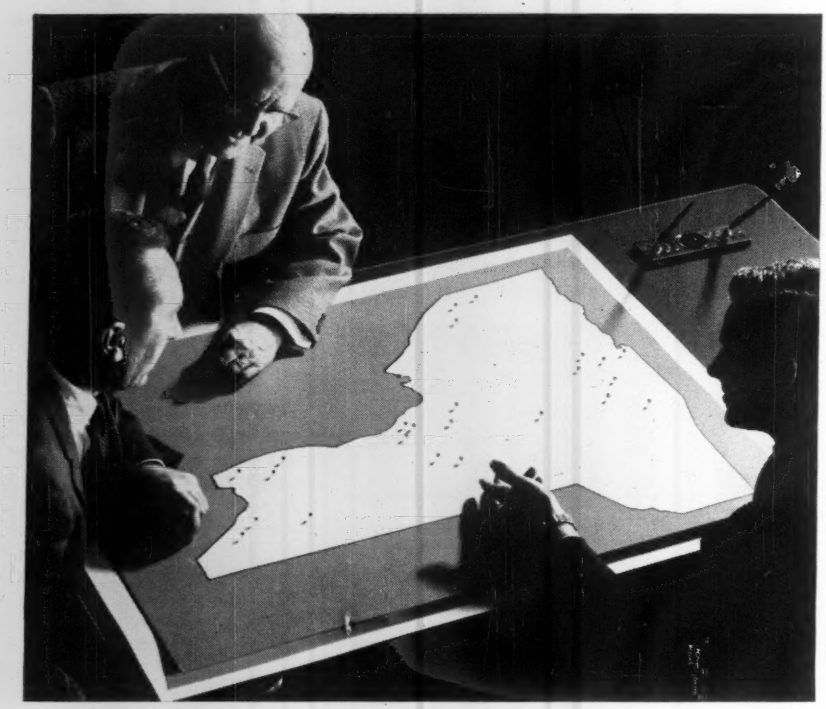
Microhoning Blind-End Bores

In addition to bores in hardened steel sleeves and soft steel cylinders, Cadillac also Microhones several bores in soft steel valve bodies. One of these is a blind-end bore. It is .625" in diameter, 1.75" long and has a $\frac{1}{16}$" relief at the bottom. Microhoning is specified to hold geometric tolerances within .0001".

In the processing of precision bores in a variety of components for hydraulic units, Cadillac Gage is giving versatile and tangible expression to "precision production through Microhoning."

MICROMATIC HONE CORP.
8100 SCHOOLCRAFT AVENUE • DETROIT 38, MICHIGAN

your profit potential is great... UPSTATE



Plenty of plant sites with husky profit potential are waiting for you in **UPSTATE, N.Y.**

Here, in the 22,000 square miles served by Niagara Mohawk, nearly every type of industry can find the plant site admirably suited to its needs...the site from which to serve the richest market in the world...the great Northeast.

We can help in your search for a profitable site with fast, expert, confidential assistance. You can benefit from our comprehensive inventory of buildings and sites and the intimate, detailed knowledge of our district managers about the communities we serve. We'll gladly assist in specific research you need in *your* search for the ideal location.

Before you choose a plant site, learn all the advantages waiting for you in Upstate, N. Y.: a wealth of natural resources . . . plenty of low-cost electric power...abundant water... a solid labor force...a most attractive political and economic climate . . . healthy, diversified industrial neighbors prospering here. Transportation is particularly attractive; the growing network of superhighways, the St. Lawrence Seaway, the Barge Canal and excellent rail and air service combine to provide fast, dependable access to the rich northeastern market and Canada and to the seaports of the world.

For complete information on the services we offer...and for concrete help in your search...write, wire or phone Director of Area Development, Niagara Mohawk Power Corporation, Dept. D-3, 300 Erie Blvd. West, Syracuse 2, N. Y.

NIAGARA MOHAWK

BUSINESS MANAGED • TAXPAYING

in the plant environment have actually been negotiated. For instance, a shutdown was avoided by a Michigan producer of air-conditioning components when the company agreed during a hot July bargaining session to have the plant entirely air conditioned within a few weeks.

Like the other elements in the improved plant environment, such as lighting, color conditioning, and air conditioning, background music can pay for itself with very small—usually only 1 or 2 per cent—gains in productivity.

Usually the purveyors of these plant improvements claim that almost invariably the addition of their products will result in much higher productivity gains and that the buyer will make a considerable profit on the investment in the plant environmental improvement.

Drowning the din

Increasingly, background music is being used not merely to make the day pass more quickly for employees burdened with dull, repetitive tasks, but also to cut down on the clatter

The Light Touch

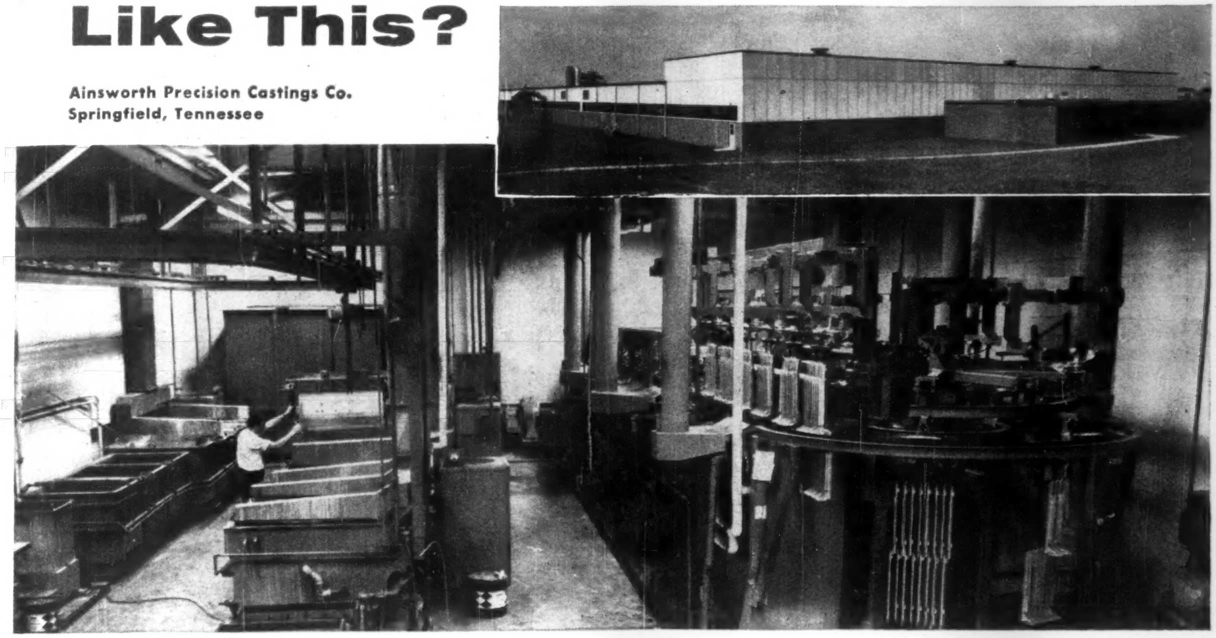
In considering an increase in the lighting levels in a production plant, there is a general rule of thumb that can be applied: On the average, it takes about a 1 per cent increase in productivity to pay for each additional 100 footcandles of light. And a doubling of the light level results in a doubling of the actual cost of the lighting, including power and fixtures. The proponents of better plant lighting—the equipment producers and utilities—claim that the resulting gains in productivity are invariably larger.

However, despite the demonstrable benefits of better lighting, experts estimate that only about 5 per cent of industry's space actually meets the minimum recommendations developed by authorities in the field. Clearly, a big job is waiting to be done.

LOOK FOR THE DIAMONDS—SIGN OF FINISHING QUALITY

Can You Use Process Engineering Service Like This?

Ainsworth Precision Castings Co.
Springfield, Tennessee



Complete system for Zinc plating and Iridite—designed, fabricated, installed and serviced by Allied Research to turn out auto window channels, gear shift and directional signal components.

Here's what Allied Research did to give Ainsworth "Turn Key" service:

1. Planned the entire layout and operational details.
2. Recommended and presented complete cost analysis of processes, equipment and supplies necessary . . . and furnished them.
3. Reconditioned existing equipment and integrated it with new equipment to make the installation both economical and efficient.
4. Planned and constructed a complete waste disposal system for treating cyanide wastes.
5. Installed 14-station zinc-IRIDITE automatic, 12-station zinc barrel line, and a still line.
6. Set up procedures for regular qualitative testing of coatings and solutions.
7. Executed an extensive training program for operators.
8. Entire operation completed ahead of schedule even though overall construction was badly delayed by weather . . . production personnel merely turned the key, and started operations.

PROCESS ENGINEERING SERVICE can help you. Whether you require a single piece of equipment or a complete system. Write for complete details. Let us quote on your plans for renovation or new installation . . . call your Allied Field Engineer. He's listed in the yellow pages under "Plating Supplies".

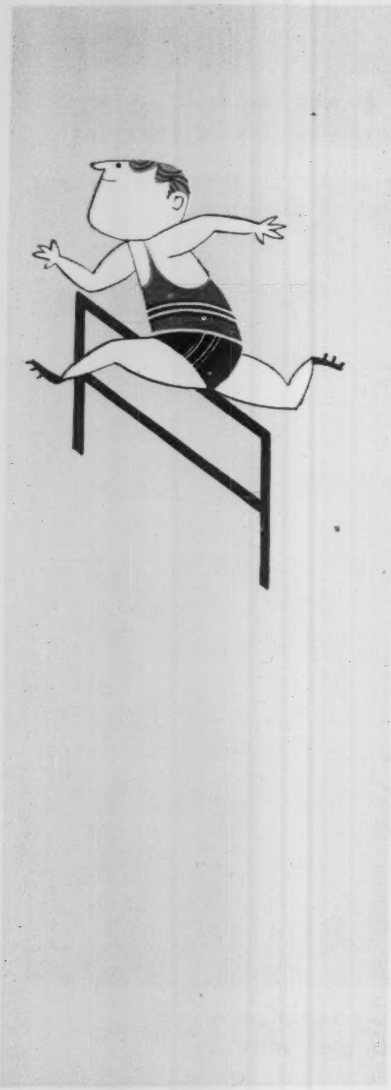
EQUIPMENT
COMPLETE SYSTEMS

Allied Research Products, Inc.

4004-06 EAST MONUMENT STREET • BALTIMORE 5, MARYLAND
BRANCH PLANT: 400 MIDLAND AVENUE • DETROIT 3, MICHIGAN
West Coast Licensee for Process Chemicals: L. H. Butcher Co.

Chemical and Electro-chemical Processes, Anodes, Rectifiers Equipment, and Supplies for Metal Finishing

IRIDITE®	**IRILAC**®	**ISOBRITE**®	**ARP**®	**WAGNER**
Chromates	Coatings	Brighteners	Supplies	Equipment



NOT ALL of the companies in this country use our Kennett materials handling receptacles, made of National Vulcanized Fibre.

INDUSTRY'S PLANT

Trends in Leaseback

Only 36 of the 197 companies surveyed by DUN'S REVIEW have made use of sales-leaseback in the past few years. And nearly half of these have used this financing technique only for warehouses or branch sales office buildings. Only sixteen of the surveyed companies plan to make more use of sales-leaseback in the future.

Although sales-leaseback has marked advantages over outright purchases in many instances, the revision of the tax laws a few years ago to allow for accelerated depreciation lessened the attractiveness of this financing device.

in noisy production areas as well.

Another unusual approach to plant decor is the use of large murals—not only in the lobby or reception areas but in the production areas.

Of course, as with all human efforts to bring improvements through new techniques, unfortunate extremes in decor now and again crop up in industrial plants. Garish colors and the use of mirrors in areas where they can be a safety hazard are evidence of unfortunate lapses in judgment.

To make the plant environment more attractive, particularly when a move is made to an outlying area, companies are adding unusual facilities for employees. Some companies, under pressure from other employers in the area not to raise the prevailing

MATCHING PLANT: *To make sure that its Chicago distribution center would blend in with the suburban landscape, Charles Pfizer & Company had it built of bricks that would match as closely as possible those used in neighboring homes.*

ONLY about 90% of the progressive, best-known electrical manufacturers, bakeries, textile mills, department stores, warehouses, mail order companies, airlines, electronic firms, drug companies and instrument companies, to name a few.

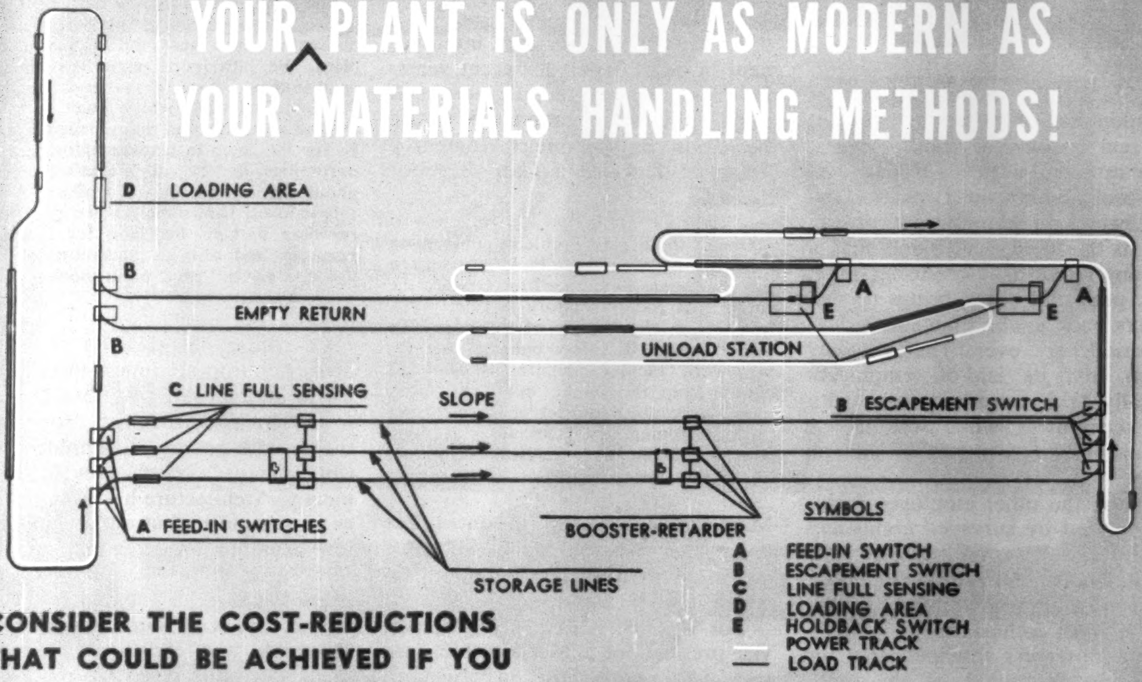
That is to say—cost conscious companies that want safer, gentler handling of delicate parts or products—on production lines, delivery routes, and in order-filling or air shipment.

Why not see how Kennett Receptacles can help your company cut costs? Write for facts today.

If you do not have a problem in materials handling, write for facts about our Lestershire Bobbins, Parsons Fine Papers, Phenolite® Laminated Plastics, or our National Vulcanized Fibre . . . more products made better by National research.

NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

YOUR NEW PLANT IS ONLY AS MODERN AS YOUR MATERIALS HANDLING METHODS!

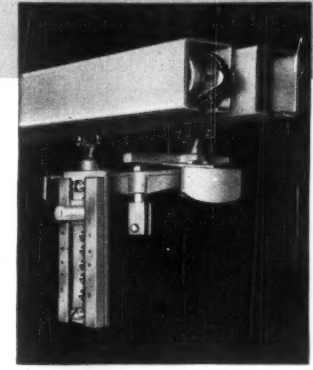

D LOADING AREA
B
EMPTY RETURN
B
C LINE FULL SENSING
SLOPE
UNLOAD STATION
A
E
A
E
B ESCAPEMENT SWITCH
A FEED-IN SWITCHES
BOOSTER-RETARDER
STORAGE LINES
SYMBOLS
A FEED-IN SWITCH
B ESCAPEMENT SWITCH
C LINE FULL SENSING
D LOADING AREA
E HOLDBACK SWITCH
POWER TRACK
LOAD TRACK

CONSIDER THE COST-REDUCTIONS THAT COULD BE ACHIEVED IF YOU HAD A "TWIN-TRAK" SYSTEM LIKE THIS IN YOUR PLANT!

R-W "TWIN-TRAK"

TRADEMARK

OVERHEAD AUTOMATIC DISPATCH SYSTEMS



An R-W "TWIN-TRAK" Overhead Automatic Dispatch System consists of one or more Power Tracks and as moving Storage or Free Tracks as desired plus Switches, Carriers, Accessories and Power Equipment. "TWIN-TRAK" Systems are economical to install, operate and maintain . . . easily expanded, altered or relocated as desired.

Industry's prime goal throughout the '60's will be to achieve substantial manufacturing cost-reductions. The handling of materials offers the greatest cost-cutting frontier and reduced costs will be accomplished only with a true "integrated" materials handling system . . . a system that co-ordinates all processing functions on a *door to door* or *plant wide basis.*

R-W "TWIN-TRAK" Systems offer the materials handling concept of tomorrow — *today.* For here is a completely automatic conveying system that not only moves products from one point to another, but automatically conveys parts and components to predetermined work stations throughout all production processes . . . parts and components that are automatically selected "from overhead" inventory banks and conveyed *where* they are needed — *when* they are needed. R-W "TWIN-TRAK" Systems not only improve materials handling but also permit the coordinated use of new production techniques and machinery to provide "machine muscle" for the raising, lowering, moving and transferring of parts and components to produce products faster and more economically. Now is the time to investigate the "cost-saving" potential offered by an R-W "TWIN-TRAK" Overhead Automatic Dispatch System.

If you are planning to modernize your present plant or build a new one, it will be to your advantage to write for a "TWIN-TRAK" Catalog. Better yet, why not pass this on to your production engineer in charge of cost-reduction . . . have him talk to your local R-W Materials Handling Specialist about the cost-saving advantages of an R-W "TWIN-TRAK" system.

Richards-Wilcox
MANUFACTURING COMPANY
MATERIALS HANDLING DIVISION
475 W. THIRD ST. • AURORA, ILL. • Branches in all Principal Cities

wage scale, have discovered that a recreation park or swimming pool can be a real magnet for good workers.

For instance, a New England machine-tool manufacturer, plagued by wide swings in employment as are most in this field, has found that a company-provided, close-to-the-plant picnic park and beach brings needed workers back to the plant when layoff periods are over. The company reports that its laid-off employees generally take temporary jobs with other companies while waiting for the machine tool orders to pile up again.

Among the other employee facilities reported by surveyed companies are bowling alleys, golf courses, recreation facilities for retired personnel, and even an after-hours workshop for do-it-yourself enthusiasts.

Some observers anticipate that the decline in the ranks of the semi-skilled production workers and the upgrading of many employees in the next decade may be reflected in more sophisticated employee services such as non-technical lending libraries in many plants.

But despite the immense improvement in plant design in recent years, new plants are not gleefully welcomed in all suburban communities across the nation. Says architect Humphrey Nolan of J. Gordon Carr & Associates:

> One of the biggest problems confronting the company planning to build a factory in suburban areas is the need to convince the public that today's factory is utterly different from the factory of the past. The mental image of grimy ugliness that the very word "factory" conjures up has to be erased from the public mind. So many times, a beautiful project is turned down by local zoning boards because the company has failed to make clear the nature of the new installation.

Management, in many instances, has to engage in a real public relations campaign to woo the community in which it would like to locate.

For example, Victor H. Pomper, vice president of H.H. Scott, Inc. (see page 55) now located in Maynard, Mass., describes his company's efforts to place a plant in that community:

> Herman Scott and I did a lot of basic public relations groundwork before the plant actually started. We visited and got acquainted with town officials, local editors, and all the property owners in the residential area near the proposed new plant. We introduced ourselves and then showed them colored drawings of the plant. We described what a nice, quiet operation we had and what the many benefits would be for the town in taxes, employment opportunities, and so on. We left brochures about the equipment we produce. All of this paid off handsomely when it came to rezoning part of the land for industrial purposes and also in undercutting resistance to an industrial plant moving into a residential area.

Of course, the creation of an impressive corporate image through the use of an imposing plant building and work environment can sometimes rankle with visiting stockholders who can visualize other uses for their money. Architecture has been defined as frozen music, but admittedly some few examples of industrial architecture seem more like blasts from a brass horn.

But, says R. P. Sumberg, controller, Research and Advanced Development Division, Avco Corp.: "Some people think that the cost of a building is directly associated with its

---

"THE GREATEST RESOURCE OF ANY REGION IS ITS HUMAN RESOURCE. OUR AREA POSSESSES A LARGE, SKILLED AND VERSATILE WORK FORCE."

This quotation, from Detroit Edison's Annual Report for 1959, sums up Michigan's present economic leadership and points the way toward even greater pioneering in research, scientific development and utilization of skills for a promising future. It highlights, too, Detroit Edison's endeavors to bring greater opportunities to the people and communities it serves in Southeastern Michigan.

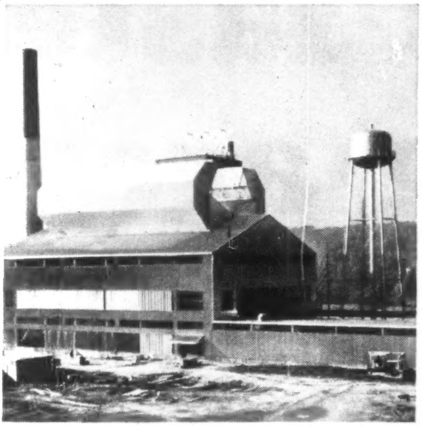
The Annual Report also outlines many other phases of Detroit Edison's continuing record of service to its million and a quarter customers. For example, total investment in the service area is over $1.1 billion and its electrical generating capacity has grown to 3¾ million kilowatts.

Partners in this electric enterprise are nearly 106,000 Detroit Edison shareholders—70% of them in Michigan—who received dividends at the rate of $2.00 per share in 1959, and the Company employes, who again achieved outstanding leadership in electric industry operations.

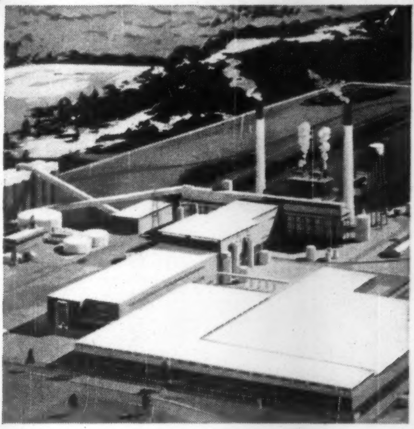
The people in Michigan look to the future with confidence. Detroit Edison will continue to provide them with versatile electric energy and industrial leadership to better use both natural and human resources.

For a copy of the 1959 Annual Report write—

THE TREASURER
THE DETROIT EDISON COMPANY
DETROIT 26, MICHIGAN



Glass Plant
Owens-Corning Fiberglas Corporation



Chemical Cellulose Plant
Rayonier Incorporated

RESERVED
for
your next
plant

Appliance Manufacturing Plant
Westinghouse Electric Corporation

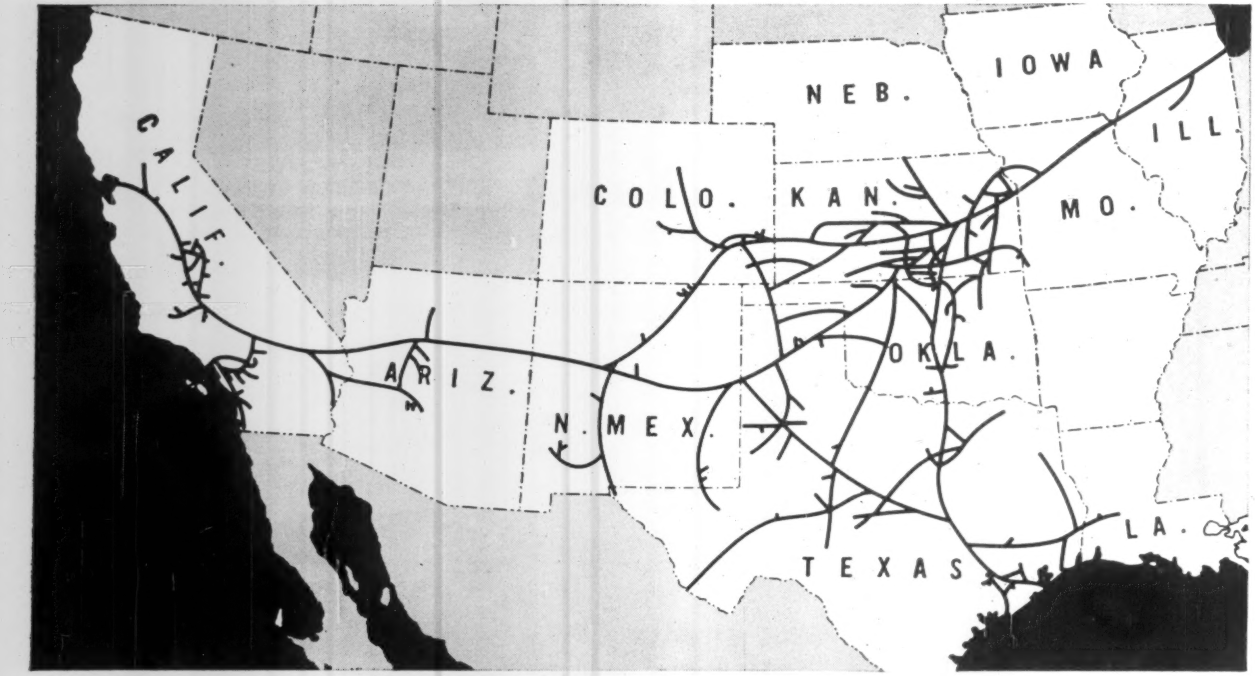
The companies whose plants are featured on this page are among many in widely different industries for whom Ebasco has handled the design and construction of new plants.

In every phase of engineering and construction, Ebasco's wide experience and reputation for uncompromising quality can assure you of satisfactory results. For more information, write for your copy of "Engineering, Design and Construction Services." Address: Ebasco Services Incorporated, Two Rector Street, New York 6, New York.

ENGINEERS · CONSTRUCTORS
EBASCO
BUSINESS CONSULTANTS

NEW YORK · CHICAGO ®
DALLAS · PORTLAND, ORE.
SAN FRANCISCO · WASHINGTON, D. C.

Locate your plant in America's fastest growing area



Let Santa Fe prepare a personalized survey for you showing the ideal location for your plant along the 13,000 miles of Santa Fe track

If you're considering a plant site in America's fastest growing area of the West or Southwest, let Santa Fe help you. We'll prepare an up-to-the-minute survey giving you accurate information about labor supply, taxes, utilities, raw materials, transportation and hundreds of other vital questions.

There is no obligation for this service. Just phone your nearest Santa Fe traffic office or contact our Industrial Development Department direct.

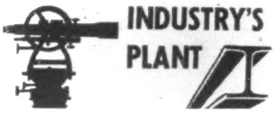
Santa Fe

Industrial Development Department
SANTA FE RAILWAY
80 E. Jackson Blvd., Chicago 4, Ill.

looks. In fact, we have had people come to our new research center and say, 'What a monument you have!' But we had discovered this in the course of putting up the building: We had a very wide latitude as far as looks were concerned within a very narrow price range.

"The important cost, the single biggest cost, was for utilities and flexibility and not for appearance. You can have a beautiful place or you can have a very dull-looking place with very little difference in the actual cost." The responsibility for creating plant facilities that will be pleasing both to the eye and to the profit statement is one that will bear more heavily upon top management as industry moves deeper into the new decade.

New Guide to Plant Location



Here is a roundup of basic facts a company must weigh before deciding where to put a plant.

Management is generally aware that many major cost factors in any plant location decision vary from region to region throughout the nation. Differences of as much as 40 per cent of total operating costs can be the result of regional factors, according to a survey by the Fantus Factory Locating Service.

In multi-plant companies, management can draw its comparisons from actual operating costs at various locations. But the small manufacturer usually has to rely on guesswork about the supposed operating advantages enjoyed by competitors in other parts of the country. He may have a vague notion that "We can save labor costs in the South," or "Mainsylvania has a better tax picture than we do," or "We could certainly cut our freight costs if we were closer to the markets."

Beware of generalities

There are many pitfalls involved in the entire process of plant location decision making (see "The Ten Biggest Pitfalls in Plant Location," DUN'S REVIEW, March 1957), but one of the most common and potentially most dangerous mistakes involves attempts to generalize about regional variables without thorough investigation. Differences within a state or within a region frequently are greater than differences between states or between regions.

The table on pages 78 and 79 pinpoints the major differences in location considerations among the various states. Major state-to-state variations exist in tax law and philosophy, labor law, business regulation, political views of the government, and methods of assisting new industry. Some important differences in regions can be found in labor costs, fuel costs, and proximity to markets or raw materials.

Because of the confusion which can easily develop when state taxes are compared, we have not included specific tax rates in the table. Rates are meaningless, since the only sound way of determining the impact of state taxes is through application of the pertinent tax structure to a particular company's own operating conditions. The tax cost to a manufacturing corporation can actually be greater in a state without a corporate income tax than in some states which have such a tax.

Regardless of the rate, the state tax burden is determined by such considerations as whether deductions from Federal income tax are permitted, what the allocation formula may be, the amount of company sales in the state, the importance of the sales component in the state's allocation formula, and so on.

Furthermore, it is unwise to consider taxes at the state level independently of taxes at the local level. Depending upon a particular state's taxing philosophy, varying amounts of revenue may be rebated to the local community, thereby reducing the need for tax collections at the local level. In many cases, the *total* taxes—local, state, and Federal—are lower in a high income tax state than in a state which has no such tax.

Figuring services rendered

Finally, any interpretation of the tax cost either at the local or state level is really meaningless without considering the services rendered by all the taxing agencies. For example, in some communities, the cost of sewage disposal is covered through a tax levy. In other communities where taxes might be lower, such costs would be met through sewer charges added on the water bill. Obviously, an appraisal of the difference in tax cost without reference to over-all operating costs would be unsound.

(*continued on page 80*)

An Eagle's-Eye View of

48 State Plant

	Average Hourly Earnings in Mfg.—1959	Percentage Rise in Hourly Earnings 1950–1959	Fair Employment Practices Law	Right to Work Law	Percentage of Workers Organized AFL-CIO (1)	Man Days Idle Through Strikes as Percentage of Working Time (6)
Alabama	$1.79	51.7%	No	Yes	24%	.09%
Arizona	2.44	67.1	No	Yes	28	.09
Arkansas	1.51	48.0	No	Yes	21	.08
California	2.51	52.1	No	No	40	.12
Colorado	2.22	43.2	Yes	No	29	.29
Connecticut	2.25	57.3	Yes	No	29	.10
Delaware	2.17	52.8	No	No	20	.28
Florida	1.82	66.9	No	Yes	18	.18
Georgia	1.61	49.1	No	Yes	16	.15
Idaho	2.29	44.9	No	No	21	.08
Illinois	2.38	55.5	No	No	41	.23
Indiana	2.37	50.9	Yes	Yes	41	.30
Iowa	2.30	64.3	Yes	Yes	28	.17
Kansas	2.30	60.8	Yes	Yes	24	.10
Kentucky	2.03	36.2	No	No	24	.32
Louisiana	2.10	68.0	No	No	20	.18
Maine	1.72	44.5	No	No	20	.05
Maryland	2.10	54.4	No	No	25	.07
Massachusetts	2.02	46.4	Yes	No	32	.13
Michigan	2.68	55.8	Yes	No	48	.72
Minnesota	2.25	56.2	Yes	No	40	.11
Mississippi	1.49	53.6	No	Yes	15	.06
Missouri	2.13	54.3	No	No	41	.24
Montana	2.41	49.7	No	No	40	.13
Nebraska	1.99	57.9	No	Yes	19	.28
Nevada	2.63	55.6	No	Yes	32	.11
New Hampshire	1.71	41.3	No	No	25	.16
New Jersey	2.29	51.6	Yes	No	37	.22
New Mexico	1.97	42.7	Yes	No	13	.29
New York	2.22	46.0	Yes	No	36	.18
North Carolina	1.51	37.3	No	Yes	9	.03
North Dakota	1.89	53.6	No	Yes	10	.04
Ohio	2.49	54.0	No	No	40	.48
Oklahoma	2.10	55.5	No	No	17	.09
Oregon	2.46	37.4	Yes	No	47	.77
Pennsylvania	2.13	48.9	Yes	No	36	.22
Rhode Island	1.84	43.7	Yes	No	30	.08
South Carolina	1.52	36.9	No	Yes	9	.02
South Dakota	1.91	49.2	No	Yes	14	.02
Tennessee	1.76	47.9	No	Yes	22	.14
Texas	2.13	57.8	No	Yes	17	.17
Utah	2.38	67.6	No	Yes	23	.20
Vermont	1.79	47.9	No	No	16	.03
Virginia	1.72	45.8	No	Yes	17	.08
Washington	2.56	47.9	Yes	No	59	.43
West Virginia	2.34	48.1	No	No	22	.23
Wisconsin	2.23	51.7	Yes	No	41	.15
Wyoming	2.44	40.2	No	No	26	.06

(1) 1956 data
(2) Average of several cities, 1958. Does *not* reflect varying equipment or operational costs
(3) Natural gas significantly least expensive
(4) Gross Income Tax
(5) 1958 data
(6) 1958 data; U. S. average: 0.22

Plant Location

This table and the accompanying explanation (see page 77) were prepared at the suggestion of DUN'S REVIEW *by Maurice Fulton, Partner—*
Fantus Factory Locating Service, Chicago—New York

Location Factors

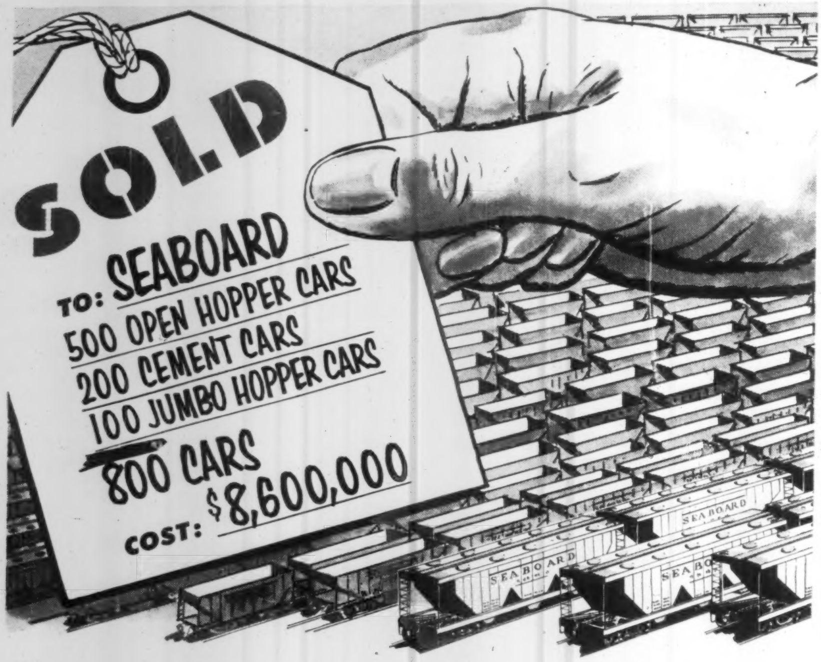
Corporate Income Tax	Per Capita Tax Burden (5)	Off Track Fuel Costs (2) Per Million BTU			Development and Financial Devices (7)	Percentage of U.S. Market		Unemployment Compensation Tax	
		Coal	Oil	Gas		Industrial	Consumer	Minimum Rate (9)	Reserve as Percentage of Wages (10)
Yes	$73	$.412	—	$.342	C, D	1.46%	1.85%	0.50%	5.6%
Yes	98	(3)	(3)	(3)	D	.24	.67	0.45	10.2
Yes	80	.526		.284	B, C, D	.52	1.04	0.10	6.9
Yes	120	(3)	(3)	(3)		7.41	8.17	0.0	7.9
Yes	99	.410	$.453	.496		.43	.98	0.0	8.3
Yes	97	.448	.441	1.440	A	2.55	1.32	0.50	9.5
Yes	119	.416	.427	1.392		.10	.49	0.10	2.7
No	107	—	—	—	D	.96	2.41	0.0	4.2
Yes	84	.459	.533	.570		1.95	2.22	0.25	7.9
Yes	83	.628	.643	.622	D	.15	.38	0.30	11.0
No	76	.432	.655	.592	C (8)	7.52	5.66	0.25	5.3
No (4)	82	.443	.576	.899		3.63	2.66	0.10	5.5
Yes	85	.480	.773	.657		.99	1.64	0.0	9.6
Yes	79	.446	—	.475		.77	1.25	0.0	8.2
Yes	68	—	—	—	C, D	1.02	1.78	0.0	8.3
Yes	125	(3)	(3)	(3)	C, D	.88	1.80	0.30	9.7
No	84	.599	.553	—	A, B	.64	.55	0.50	7.3
Yes	87	.485	.486	1.120	A, D	1.62	1.70	0.30	4.9
Yes	85	.663	.589	1.890	A	4.13	2.86	0.50	6.7
No	102	.445	.610	.797	A	6.13	4.58	1.00	2.7
Yes	96	.575	.652	.764	A	1.34	1.95	0.10	5.0
Yes	74	(3)	(3)	(3)	C, D	.63	1.28	1.50	5.2
Yes	66	.296	.505	.666		2.32	2.50	0.0	8.1
Yes	85	.481	—	.271	D	.12	.39	0.50	11.6
No	58	.610	.599	.572		.35	.85	0.10	6.7
No	138	(3)	(3)	(3)		.03	.16	0.10	7.0
No	61	.571	.582	1.500	A, B	.50	.34	0.50	5.9
No	51	.481	.455	1.490	A	4.88	3.30	0.30	8.4
Yes	129	(3)	(3)	(3)	C, D	.12	.49	0.10	9.9
Yes	95	.471	—	.950	A	11.48	9.33	0.80	8.4
Yes	83	.376	.619	1.193	A	2.79	2.64	0.20	8.1
Yes	87	.726	.829	—		.04	.38	0.10	4.9
No	75	.418	.613	.693		8.00	5.40	0.10	6.7
Yes	108	.313	—	.370	D	.52	1.34	0.20	4.7
Yes	105	.701	.626	1.034		.81	1.04	0.30	2.0
Yes	80	.444	.439	.924	B	8.99	6.48	0.80	2.4
Yes	81	—	—	—		.71	.51	—	3.6
Yes	78	.517	.586	1.023		1.36	1.39	0.25	7.4
No	64	.641	.733	.832	A	.07	.41	0.0	8.0
Yes	78	.395	—	.828	C, D	1.74	2.03	0.75	4.7
No	73	(3)	(3)	(3)		2.89	5.36	0.10	5.9
Yes	93	.461	.454	.462		.22	.50	1.00	8.2
Yes	99	.471	—	—	A, D	.22	.22	0.60	7.8
Yes	68	.559	.498	1.170		1.55	2.23	0.10	4.8
No	137	.699	.612	.880		1.32	1.60	1.94	10.7
No	81	—	—	—		.78	1.16	0.0	4.7
Yes	96	.492	.712	1.040		2.71	2.27	0.0	10.1
No	116	.363	—	.365		.04	.19	0.1	8.7

(7) Does not include local agencies or devices which exist in virtually every State. Key to Development and Finance Devices: A—State Credit Corp.; B—State Development Authority; C—Municipal Bonds; D—Permissive Tax Exemption

(8) Constitutionality never tested

(9) Most states have 2.7% maximum. Higher maximum prevails in Kentucky, Michigan, Missouri, New Jersey Tennessee, Oregon, Wisconsin, Delaware, Illinois, and New York

(10) U. S. average is 6.6



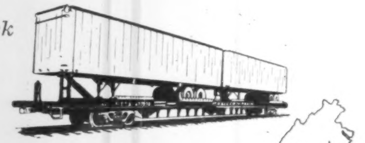
TO SERVE YOU BETTER

These new cars, scheduled for early-summer delivery, are designed to provide the most modern equipment available for efficient low-cost transportation of your bulk commodities.

This purchase represents just one of many investments in the growing, expanding Southeast which Seaboard has made in the past and will make in the future. Our plans are geared to tomorrow's as well as today's requirements of this favored area.

New equipment, plant improvement and maintenance enable Seaboard to provide shippers with the kind of service they want . . . and we know there is no substitute for efficient, personalized handling of every shipment routed S.A.L.

More Seaboard progress — Piggyback service is now available between principal points on the Seaboard and the North.



SEABOARD
AIR LINE
RAILROAD

VA.
N.C.
S.C.
GA.
ALA.
FLA.
IN THE SOUTHEAST IT'S SEABOARD
SEABOARD

THE ROUTE OF COURTEOUS SERVICE

Erroneous conclusions can also be drawn when comparing labor costs in different areas and states. Labor rate comparisons are misleading unless consideration is given to differences in actual productivity. And hasty conclusions about regional differences can also be unrealistic.

For example, the average hourly earnings in manufacturing are $2.03 in Kentucky and $2.22 in New York State. Yet, this does not reveal the fact that in Louisville average earnings are $2.37 as opposed to $2.06 in Binghamton, N.Y. Although the average figure for Georgia is $1.61, the average in Atlanta is $2.01. The Pennsylvania average is $2.13, but there are many communities in the state, such as York, Scranton, and Lancaster, where average earnings are less than in Atlanta.

Variables in labor costs

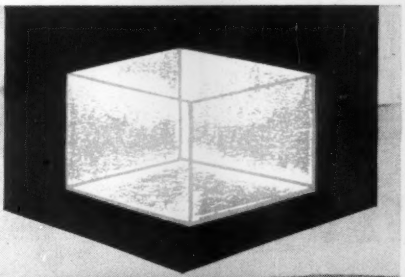
There are communities in the State of Michigan where labor costs are no greater than in communities in less industrialized states in the South. Variations in labor rates are dependent upon such things as degree of industrialization, agricultural background of the workers, union pressures, alternative employment opportunities, and a host of other considerations more significant than the geographic latitude.

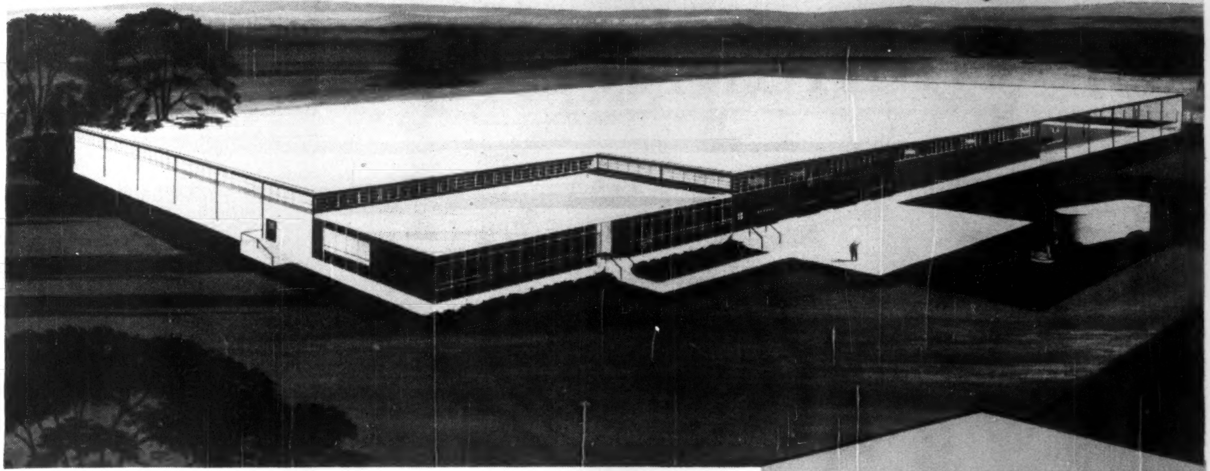
Another point to remember: although the elaborate financing devices many states offer to encourage industry to locate within their borders are often better publicized, *local* agencies are often better equipped to assist new industry to locate.

And in assessing the comparative extent of unionization, it should be remembered that in recent years many a Southern community has suffered more from troublesome work-stoppages and strikes than a community of equal size in the North. There are, however, regional or state differences that can have profound effect upon the success or failure of a manufacturing activity. There are differences in labor cost, utility cost, attitudes of the workforce, assistance in the es-

(continued on page 85)

Consider the Cube *before* construction





Every one of the 64,000 square feet serves a useful purpose in this farm Equipment Warehouse and Office (illustrated above) built by Campbell for International Harvester Co.

PLANNING • DESIGN • ENGINEERING
by Campbell Engineering, Inc.
Detroit 10, Mich.

Plants and warehouses are designed, engineered and constructed by Campbell to provide MORE CUBE per tax dollar. Campbell's feature of EXPANDABILITY, a unique method of structural framing, facilitates additions of cubic footage. This can be done conveniently and economically IN ANY SEASON without interference to the existing operations.

Campbell cubing is designed to reduce initial construction costs as well as later costs of maintenance and operation.

Just write, wire or phone . . . we'll be glad to tell you more.

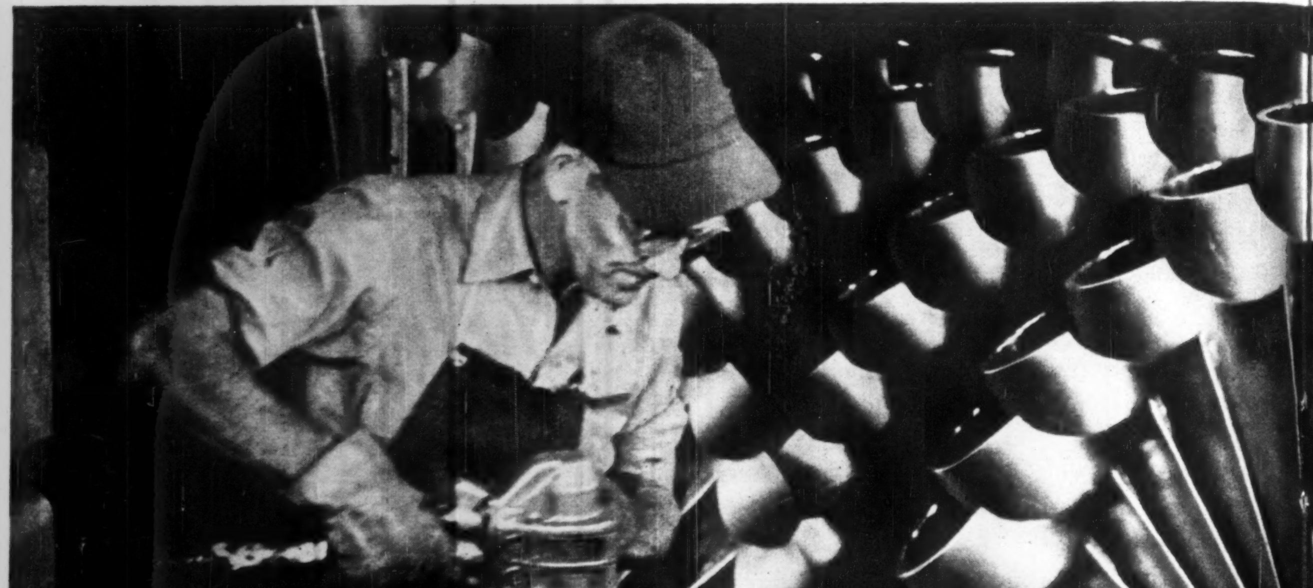
PROJECT ANALYSIS **FINANCING**
CONSTRUCTION **SITE ANALYSIS**

H. F. CAMPBELL CONSTRUCTION
CO., INC.
GENERAL BUILDING CONTRACTOR
9301 MICHIGAN AVENUE • DETROIT 10, MICHIGAN
PHONE TIFFANY 6-9000
Established 1929

A PARTIAL LIST OF CAMPBELL CLIENTS

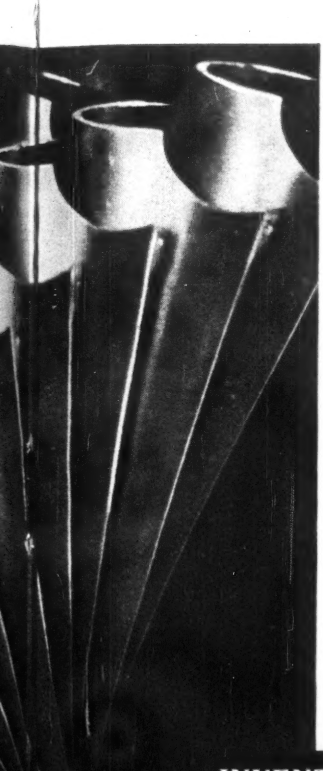
- American Motors Corp.
- Allegheny Ludlum Steel Corp.
- American Brake Shoe Co.
- Burroughs Corporation
- Chrysler Corporation
- Continental Can Company
- Evans Products Company
- Ford Motor Company
- Fuller Brush Company
- General Motors Corporation
- General Foods Corporation
- Holley Carburetor Company
- International Harvester Co.
- Michigan Bell Telephone Co.
- Morton Salt Company
- Olin-Mathieson Chemical Corp.
- Owens-Corning Fiberglas Corp.
- Remington Rand, Inc.

PROBLEM: daily inventory control of 36,972 Behr-Manning products



ANSWER:

A Western Union Private Wire System



ADVANTAGES: Daily inventory checks *in writing* on everything and anything made by Behr-Manning Co., a Division of Norton Company. Included are complete lines of coated abrasives, floor covering products, sharpening stones, and pressure-sensitive tapes. Up-to-date accuracy that 16 branch offices and warehouses in 13 states can rely on. Customer sales orders—from Boston to San Francisco—now processed *in hours* instead of days. Administrative messages, to or from Troy, N. Y. Headquarters—sent or received in minutes . . . *in writing!*

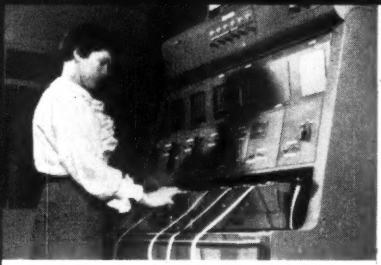
WHAT DOES IT? A 5508-mile communications network, designed by Western Union engineers to Behr-Manning's specific needs. Typical day's volume is well over 100,000 words, transmitted at incredibly high speeds. Over-all result? Better, faster service for every Behr-Manning customer!

HOW ABOUT YOUR COMPANY? Your own Western Union Private Wire System can help speed up order processing, control inventories, administer a thousand-and-one details with error-proof *written* accuracy. And the savings are surprising. Want more facts? Wire collect to: Western Union, Private Wire Division, New York, N. Y.

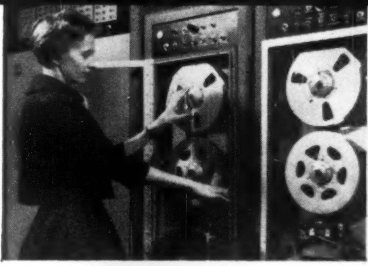
WESTERN UNION

. . . first in Private Wire Systems

INVENTORY CONTROL — THE FAST, EFFICIENT BEHR-MANNING WAY

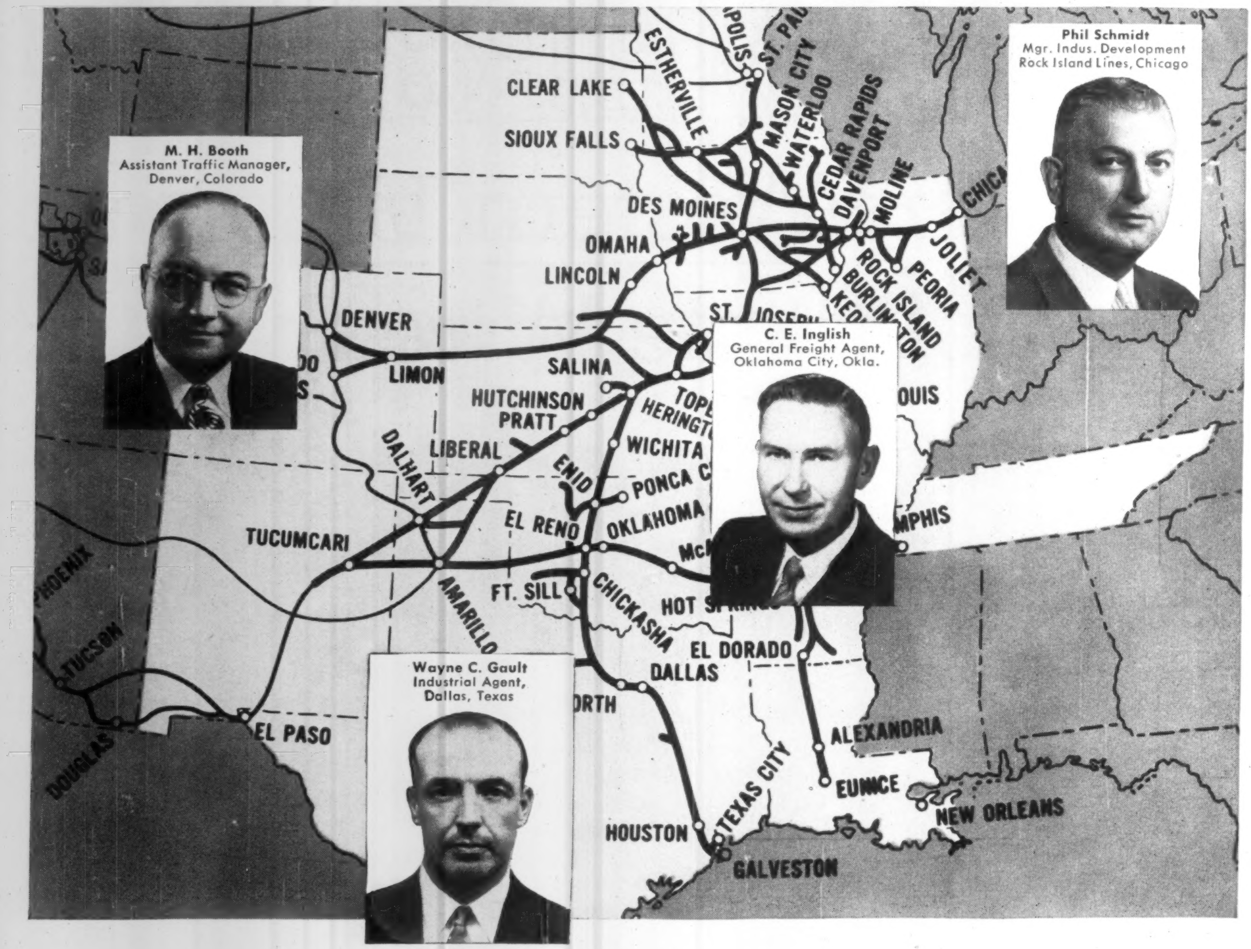


(1) SALES ORDERS, received at branch offices, sent in minutes to Headquarters Switching Center.



(2) QUANTITY AND ITEM DATA, automatically fed from computer to tape for precise inventory control.

(3) PWS MESSAGES make stock status immediately available to branch offices and warehouses in 13 states.


M. H. Booth
Assistant Traffic Manager, Denver, Colorado
Phil Schmidt
Mgr. Indus. Development Rock Island Lines, Chicago
C. E. Inglish
General Freight Agent, Oklahoma City, Okla.
Wayne C. Gault
Industrial Agent, Dallas, Texas
CLEAR LAKE
SIOUX FALLS
ESTHERVILLE
ST. PAUL
MASON CITY
WATERLOO
CEDAR RAPIDS
DAVENPORT
MOLINE
DES MOINES
OMAHA
LINCOLN
ROCK ISLAND
BURLINGTON
PEORIA
JOLIET
DENVER
LIMON
SALINA
HUTCHINSON
PRATT
LIBERAL
DALHART
ENID
WICHITA
EL RENO
OKLAHOMA
TUCUMCARI
AMARILLO
FT. SILL
CHICKASHA
EL DORADO
DALLAS
ALEXANDRIA
EUNICE
NEW ORLEANS
HOUSTON
TEXAS CITY
GALVESTON
EL PASO
TUCSON
PHOENIX
DOUGLAS
MPHIS
OUIS

There's room for you in ***ROCK ISLAND COUNTRY...***

AND THESE MEN HAVE THE SPOT FOR YOU

Rock Island Country is the heart of America, from which manufacturers and distributors can reach out to markets in every corner of the land.

In Rock Island Country, labor is plentiful, water, gas and electricity is abundant, taxes are reasonable.

The industrial site specialists pictured above are natives of Rock Island Country. They know their areas like the backs of their hands. They can help you select a site at the Port of Chicago, the Denver Gateway, booming Oklahoma City, or the dynamic Dallas-Ft. Worth-Houston area that will be tailor-made to your needs. Or, they can locate you along America's most important rivers.

Rock Island Country is the growing-est part of America, and the Rock Island railroad is a major part of the splendid transportation system serving it.

If you would like to inspect some of the thousands of acres of choice industrial property in Rock Island Country, one of our specialists will be glad to arrange a tour—in complete confidence. Write to:

Industrial Department 114
ROCK ISLAND LINES
La Salle Street Station, Chicago 5, Illinois

Rock Island

tablishment of a plant, total tax cost, climate, construction cost, and so on. The table on pages 78 and 79 is designed to give the reader an "eagle's-eye view" of the differences which do exist.

However, the interpretation of these different factors and their relative importance to a specific company, the extent to which generalized state conditions apply at the local level, and the combined effect upon total company operating costs and profits, are all problems which must be studied intensively.

Although neither this nor any other single table can provide the final answer to these problems, it does provide a good starting point for seeking out a profit-making location for your plant.

INDUSTRY'S PLANT

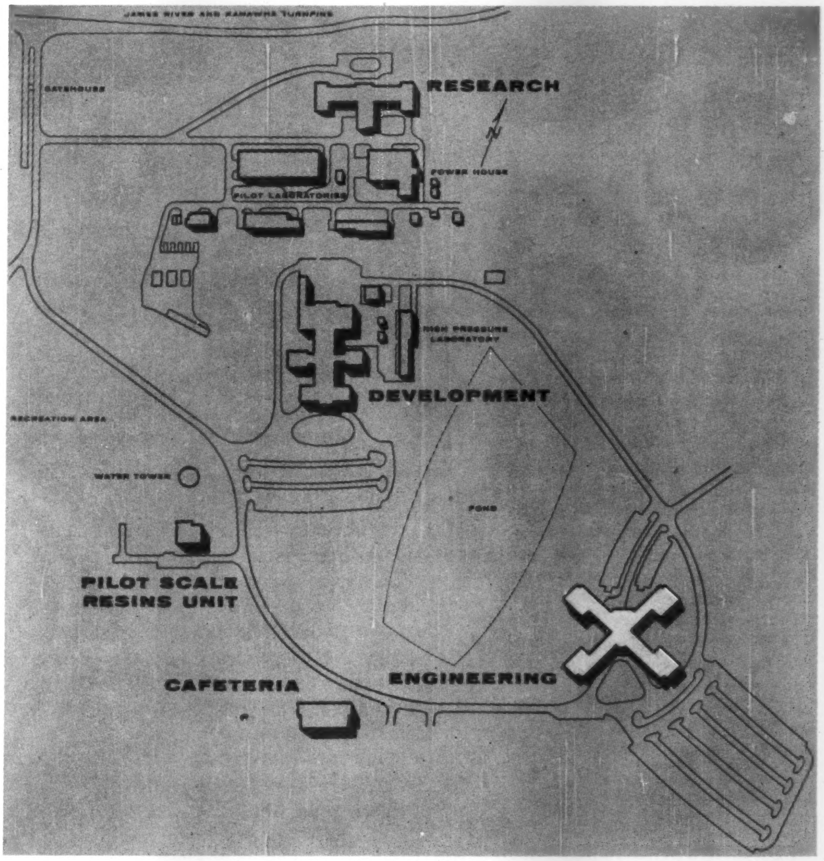
The special demands of burgeoning R & D are forcing many a company to spend millions to build and equip an elaborate "home away from home" to house its researchers and engineers.

Housing R & D

Is industrial research and development in America performed in an ivory tower? A look around the country would seem to support such a conclusion. One of the most widespread trends today in manufacturing companies is the erection of multimillion dollar "research centers" and "technical centers" set in campus-like environments. What's more, these technical centers are often deliberately built close to some great academic institution where employees can continue their education and from which the company can draw new recruits. In size, these centers range from magnificent baronies encompassing a dozen square miles to more modest establishments covering a dozen acres or less.

The distinction between a research center and a technical one is difficult to determine. To the purists, a research center means just that. Only research—basic or not-so-basic—is performed there, and all product development, process, and test engineers are persona non grata.

At other so-called research centers, product and process development, plant design, customer service, testing and even pilot-plant operations are also carried on. However, such con-



THE UNION CARBIDE *technical center in South Charleston, W. Va., is a good example of the new trend. There's loads of room for expansion. Notice how the engineering building (color) is designed so that groups working at the ends of the wings can be expanded with a minimum of distraction to the rest of the building.*

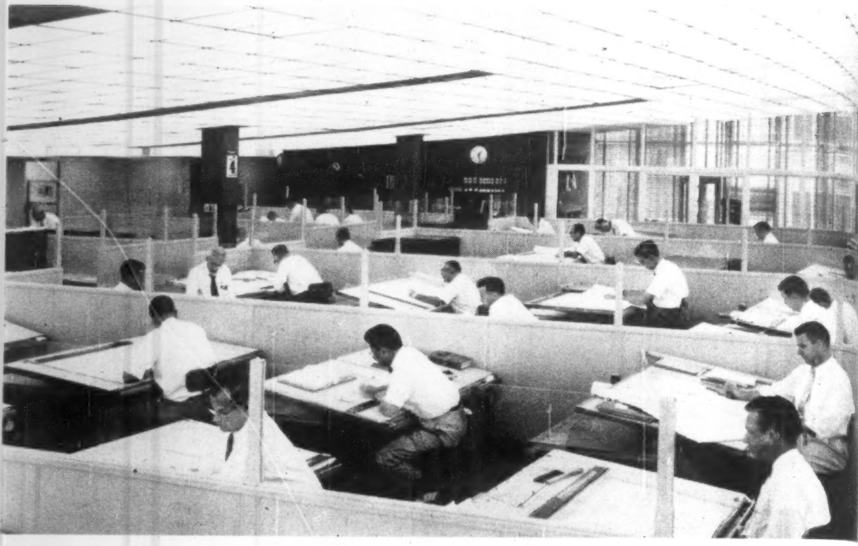
"CONELOK"
prevailing torque
SPECIALS
to specification
"HUGLOCK"
one-piece • reusable
"SEEZ-PRUF"
"MARSDEN"
free running
STANDARDS
sizes ¼"-3"
"PRECISION"
SQUARE

As the largest specialized nut manufacturer in the world, we are constantly developing new methods and products for this phase of assembly, in industry . . . In the field of locknuts we have made spectacular progress . . . besides standardized hexagon "Conelok", "Huglock" and "Marsden", sizes ¼"-3", we offer the same types in "12 Pointer," a nut designed for increased tool clearance . . . You will find in your engineering department a *12 page condensus catalog insert in Sweets Product Design file and in your purchasing department a *2 page color insert in Thomas Register . . . If you do not find the information that you want in this material, send for our comprehensive 144 page catalog . . . our sales and engineering departments are available to help you solve your fastener problems.

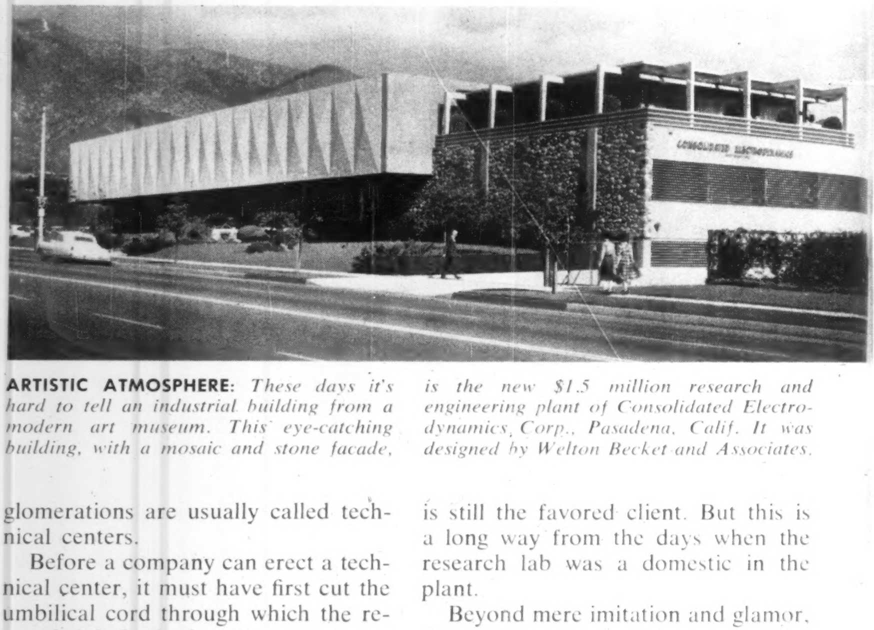
*Reprints are also available for your personal file.

NATIONAL MACHINE PRODUCTS COMPANY

an SPS company
4425 Utica Road
UTICA, Michigan



GREATER PRIVACY: *The traditional practice of housing large groups of engineers and draftsmen together in one big room is giving way to a trend towards greater privacy. Some companies house small groups of engineers in smaller rooms. Others break up the big room with partitions, as shown at Union Carbide Technical Center.*



ARTISTIC ATMOSPHERE: *These days it's hard to tell an industrial building from a modern art museum. This eye-catching building, with a mosaic and stone facade, is the new $1.5 million research and engineering plant of Consolidated Electrodynamics, Corp., Pasadena, Calif. It was designed by Welton Becket and Associates.*

glomerations are usually called technical centers.

Before a company can erect a technical center, it must have first cut the umbilical cord through which the research lab feeds the plant. Once the research lab has been moved away from the plant, all other non-manufacturing technical activities are likely to be drawn to the primary source of their technology.

The old ties to the plant are further weakened when the technical center is dignified by incorporation as a business, performing research for all comers—although this usually means the Department of Defense. Then the plant becomes just another one of its clients. Of course, the plant is still the favored client. But this is a long way from the days when the research lab was a domestic in the plant.

Beyond mere imitation and glamor, there are some sound reasons why companies are building research and/or technical centers.

In the case of research centers, it makes a lot of sense to have all the company's physicists, chemists, metallurgists, and other scientists working together in one location rather than isolated in separate physics or chemistry labs. The boundaries between the traditional scientific disciplines are breaking down. Very often it takes a team of scientists, made up of a physicist, a chemist, and so on, to solve a problem. As a result, the different kinds of scientists come to depend on each others' knowledge and intellectual stimulation, even when they are working on problems well within their specialty. This is a powerful argument for the separate research center.

A significant stimulus to the building of combination research and technical centers is the cost of scientific instruments and aids. Researchers and engineers often use the same equipment, such as giant computers, wind tunnels, or atomic research reactors. Few companies can afford to build two of each. When researchers and engineers share these and other facilities such as utilities, it can mean important savings in both initial investment and operating expenses.

However, pulling engineers out of the plant and installing them in a technical center can create problems as well as solve them. Many top executives still believe that engineers should be production- and cost-oriented rather than research-oriented. They are afraid that engineers will lose their awareness of the dollar sign if they don't work within walking distance of the plant. Some executives are also worried that the engineers may become envious and resentful if they are working in the presence of brilliant and individualistic scientists.

A vice president of a big chemical producer believes that if a process-design engineer works away from the plant where he is planning some modification, he will tend to skip those little trips to the plant to check minor problems in person. Later, as a result of weakened communications, those minor problems may grow into major headaches.

The trend throughout industry, particularly among the giant corporations which support fundamental research, is to locate the research center miles from the main plant or company headquarters. Here are some of the main reasons given for this trend:

- To provide room for future growth.
- To prevent the research staff from being called on to solve product and process development and sales problems.
- To be near an educational institution which will provide the opportu-

Why pay for downtime losses like this . . .

RENTING

eliminates downtime!

Losses due to downtime of equipment *can be* avoided! When you rent through the Clark Rental System you get three important assurances against such losses. First, you get all new equipment. Second, your rented trucks are expertly maintained as part of your rental contract. Third, you are able to draw from a fleet of replacement equipment maintained especially for your emergency use.

When you rent you save in many ways:

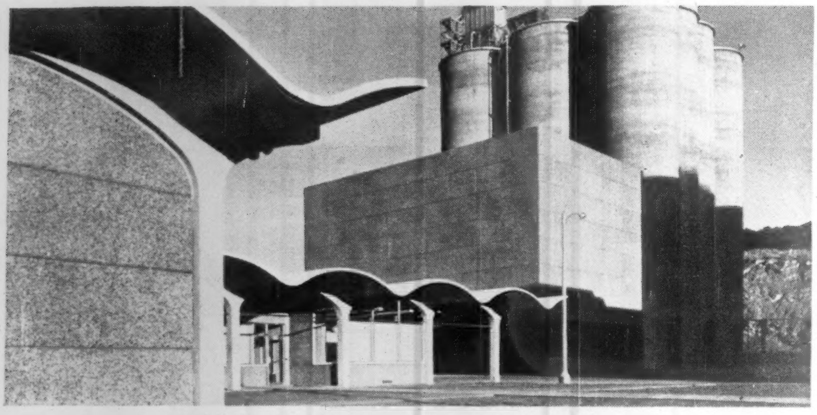
1 All maintenance problems are eliminated.
2 Downtime is eliminated.
3 Idle equipment is eliminated.
4 Capital investment is eliminated.
5 Hidden costs are eliminated.

A special cost comparison chart, comparing ownership to rental, is available for computation in the privacy of your own office. A letter, a wire or phone call will bring you both the cost comparison chart and a detailed brochure on the Clark Rental System. No obligation, of course.

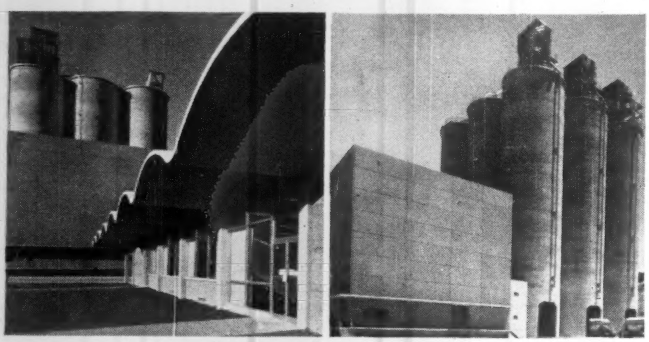
CLARK® RENTAL SYSTEM

Tailored rental programs for long or short term

CLARK RENTAL CORPORATION
485 Lexington Avenue,
New York 17, N. Y. • JU 2-3910
Dealers in all principal cities



Architectural concrete creates an interesting design pattern at Ideal's Tijeras, New Mexico, plant.



Graceful, curved roof sections contrast with the line and mass of cylindrical silos and cubical buildings at Tijeras.

ARCHITECTURAL CONCRETE LENDS
BEAUTY
TO IDEAL CEMENT PLANT DESIGN

Ideal Cement Company's new plants at Houston, Texas; Ada, Oklahoma; and Tijeras, New Mexico, are testimonial to the fact that cement plants can be beautiful when they are made with architectural concrete.

These highly efficient plants embody the latest concrete construction techniques with precast, prestressed roof sections and panels, precast aggregate panels for building facings, slip form silos, and other concrete structures. These handsome plants are part of the new world of concrete which is providing industrial and commercial structures that are beautiful as well as economical and useful.

PORTLAND IDEAL CEMENT

IDEAL CEMENT COMPANY
DENVER, COLORADO

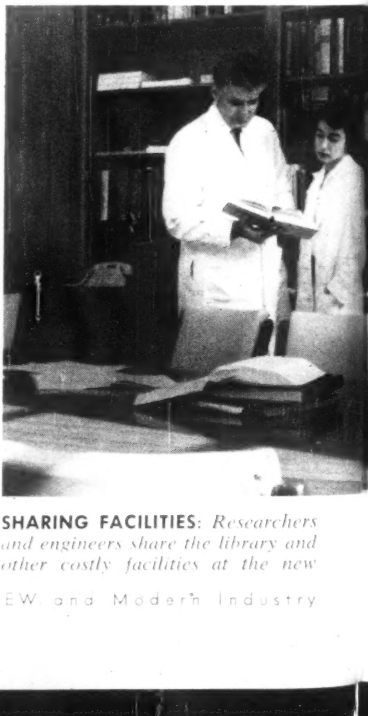
LISTED ON THE NEW YORK AND PACIFIC COAST STOCK EXCHANGES

SERVING SOME OF THE MOST RAPIDLY GROWING MARKETS IN THE UNITED STATES

nity for the research staff to continue their professional training and from which the company can recruit new personnel and obtain the services of the faculty as consultants. (However, a minority of companies are deliberately erecting technical centers far away from colleges to discourage technicians from attending them. They have found that as soon as a technician gets a degree, he wants a better job—and usually quits to find it.)

- To allow technicians to escape the seniority and wage-and-hour restrictions placed on them by union bargaining units within the plant
- To take advantage of zoning regulations which welcome research buildings but prohibit factories and which permit research centers to be located in residential districts where the staff can live close by. Companies say this encourages the researchers to run down to the lab and try out new ideas whenever they occur to them
- To achieve cheaper, more effective security, both for military and company confidential projects
- To find land on which to erect modern buildings in attractive surroundings, the object being to impress stockholders and customers, encourage creativity, and aid in recruiting

On the other hand, there are many



SHARING FACILITIES: *Researchers and engineers share the library and other costly facilities at the new* conditions which make it advisable to keep the research lab close to the plant. Here are some of them:

- When the research lab performs quality control functions as well as research
- When the plant contains some facilities or equipment also used by the lab that are too costly to duplicate
- When process research is involved
- When it is the practice for researchers to follow their ideas along through development into production
- When there is a need to keep a tighter rein on R & D expenditures

George Philips of Armour Research Foundation reports that many companies have come up with a rule of thumb that a research facility should be roughly one and one-half hours in traveling time from the main production plant or corporate headquarters. But some large corporations with headquarters in the Midwest have located their research labs as far away as Boston to be near Harvard University and the Massachusetts Institute of Technology.

Smaller manufacturers, whose research is usually more closely tied to their production line, tend to keep research buildings close to corporate headquarters or the main plant.

The Fuller Brush Company, Hartford, Conn., has achieved a satisfactory compromise on this problem, according to works manager H. Paul Cleaver. The company's new research building is close to the factory, but the entrances are not convenient to the factory, and no one is permitted

Colgate-Palmolive Research Laboratory at New Brunswick, New Jersey.

WANT PROOF?

... a work force can be trained for you at no cost when you locate in WESTern PENNsylvania

WESTern PENNsylvania

Write to:
WEST PENN POWER
An operating unit of the WEST PENN ELECTRIC SYSTEM

WEST PENN POWER, Area Development Department
Greensburg, Pa., Phone: TEmple 7-3000 DR-22

Yes, I'd like proof that my workers can be trained at *no cost to me* if I locate in WESTern PENNsylvania!

Name ______ Title ______

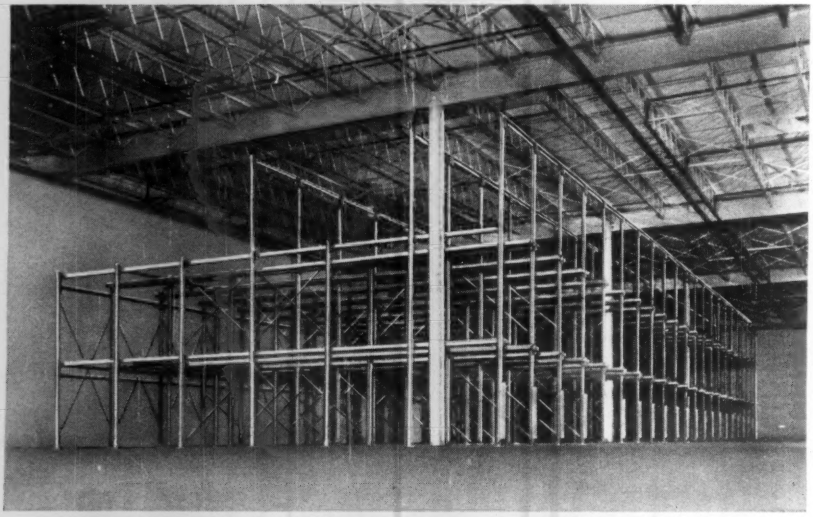
Company ______

Address ______ Telephone ______

City ______ Zone ______ State ______

American

OPEN-END



American Open-End Rack installation, Kingsport Press Company, Kingsport, Tennessee.

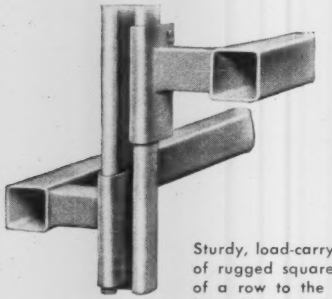
Drive-In or Drive-Thru

ADJUSTABLE RACKS

quickly pay for themselves in cutting labor costs and in giving extra storage space

MOST for the LEAST . . . that's the big story behind American "Drive-In" or "Drive-Thru" storage racks . . . MOST in cube storage and storing efficiency . . . LEAST in labor costs. These solid facts have been proved time and time again. American "Drive-Thru" racks are open at both ends so trucks can travel all the way through for "first-in," "first-out" storage. American "Drive-In" racks, with one end open, are for use against a wall or where "first-in", "first-out" storage is not necessary. American trigger-quick, slide-n-lock stringers mean quick adjustability for speedy load handling. There's a lot more to tell about these rugged, super-efficient American storage racks, so send for all the facts today.

send for literature



Sturdy, load-carrying stringers are made of rugged square tubing from one end of a row to the other. They raise and lower like a window, on 4" centers, with the American trigger-quick, slide-n-lock method of assembly.

AMERICAN METAL PRODUCTS COMPANY
STORAGE RACK DIVISION
5969 LINSDALE AVE. amp® DETROIT 4, MICHIGAN

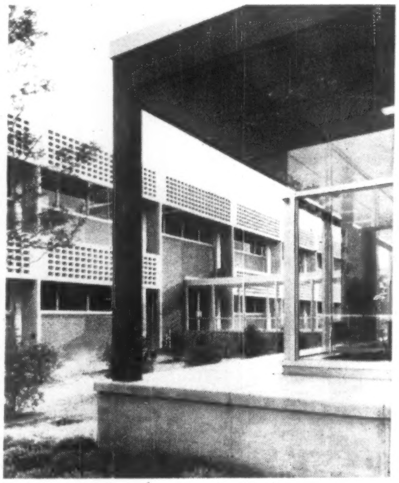
to enter from the plant or office without permission.

A new solution to the problem of locating a research laboratory is the "research park." Like the industrial district or park, the research park offers a concentration of desirable facilities and services. These include attractive building sites, room for expansion, the absence of heavy industry, desirable residential areas nearby, cultural and recreational facilities, institutes for graduate study, and, perhaps, a cooperative research facility.

Thus far, only three such research parks have been established. These are the "science park" of the International Science Foundation, 140 miles south of San Francisco; Research Triangle Park in North Carolina; and Sterling Forest, about 35 miles outside New York City. In addition, the towns of Princeton, N.J., and Palo Alto, Calif., and their environs are taking on some of the characteristics of a research park.

Each one offers an environment characterized by greenery, culture, and scholarship. California's science park can draw on the cultural facilities of the Bay area and San Francisco, as well as the educational facilities of the University of California and Stanford University. And Stan-

continued on page 92



CONCRETE AWNINGS: *Technical buildings in the South require devices to cut the sun's glare. These concrete "visors" on the buildings of the Philip Morris Research Center help cut the air-conditioning load.*

Examples of New Technical Centers

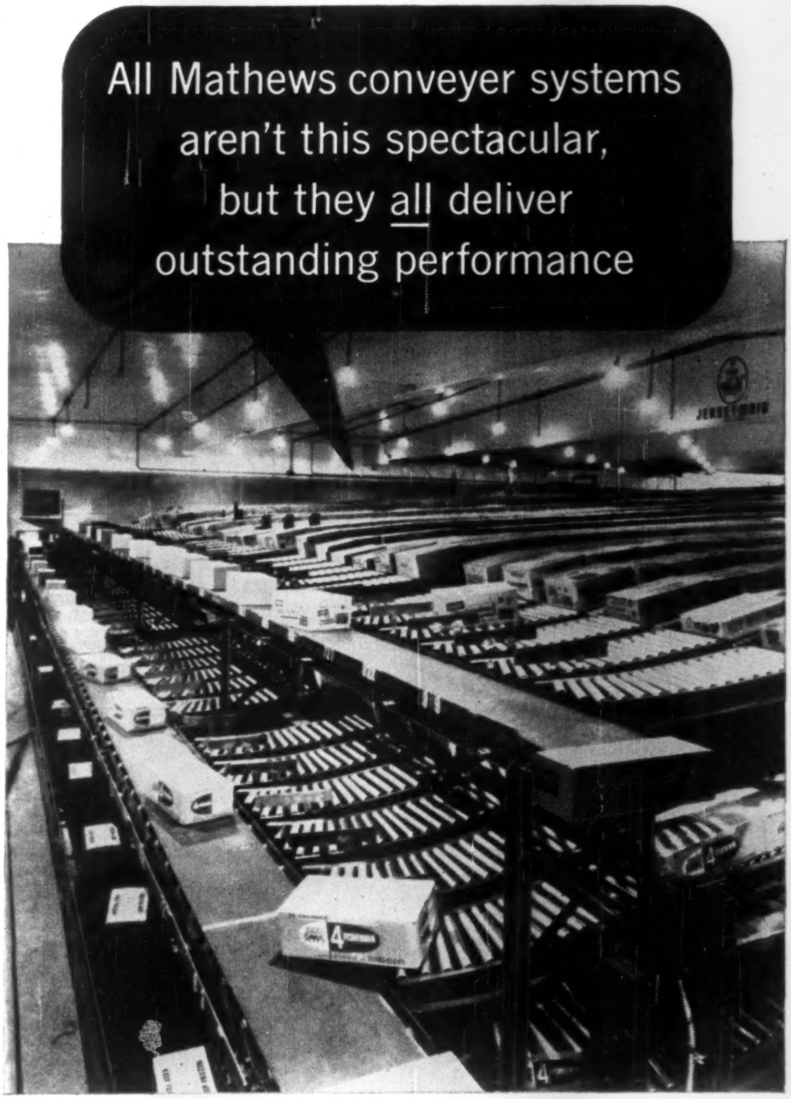
- Leeds and Northrup Company is now moving its technical staff to a new R&D center at North Wales, about 22 miles from company general offices in Germantown, Pa. The building contains 65,000 square feet, but there is enough land to support a 300 per cent expansion. The building houses a staff of about 130. Distribution of utilities is overhead rather than through the floor—and they are left exposed. Over-all cost was $26.45 per square foot.

- Colgate Palmolive Company worked out an unusual interim solution to housing its biological research staff until a new technical center is finished. A laboratory was built on the Elm Farm campus of Rutgers Preparatory School in New Brunswick, N.J. The building is leased from the school. When the staff moves to the new center nearby in about two years, the lab will be turned over to the school for use as a classroom.

- Minnesota Mining & Manufacturing Company has combined research and administrative functions at one location, a 265-acre tract just east of St. Paul. The company expects it to take care of growth until at least 1975. The tract was purchased in 1950 and now contains seven technical buildings.

- In contrast to the many technical centers that contain a number of buildings, International Harvester Company has chosen to house its entire farm equipment research and engineering center under one roof. The $5 million building contains 455,000 square feet, more than ten acres. When fully occupied the center will house 1,500 technical people.

- One of the most spectacular sites for a center is a tract occupied by the new Aeronutronics engineering and research center. It is on a high bluff overlooking the Pacific Ocean at Newport Beach, Calif. So far, two buildings in the $22 million complex have been constructed. They are a computer building and an "aerothermochemical" laboratory. The organization is a division of Ford Motor Company.


All Mathews conveyer systems aren't this spectacular, but they all deliver outstanding performance

• It's true that everyone can't use an order-selecting system like this — but — it's also true that everyone specifying conveying equipment has a right to expect this type of *outstanding performance.*

You can have the benefit of well-planned mechanized handling in *your* plant. Mathews Engineers would like to work with you in developing a conveying system that will create a smooth flow of *your* product — a system that will deliver outstanding performance *for you.*

GENERAL OFFICES .... MATHEWS CONVEYER COMPANY
Ellwood City, Pennsylvania
WESTERN DIVISION .... MATHEWS CONVEYER COMPANY WEST COAST
San Carlos, California
CANADIAN DIVISION .... MATHEWS CONVEYER COMPANY, LTD.
Port Hope, Ontario, Canada

Over Fifty Years of Leadership in Mechanized Handling

MATHEWS

Attractive Buildings *can* be 100% Functional and Reasonably Priced

Delagrange Ford Sales is a 60' x 140' Cuckler Building, with garage, showroom, office and room for sales meetings.

Inviting Delagrange showroom has abundant space for auto display and customer traffic.

MR. LOUIS DELAGRANGE
President, Delagrange Ford Sales, Inc., New Haven, Ind., says: "In the highly competitive retail automobile business, it was necessary for us as a new dealer to have an attractive sales and service building that would help instill customer confidence in our new but sincere organization. This had to be accomplished in a minimum time at lowest possible cost, but with considerable regard to space utilization and low maintenance."

According to Delagrange, "This has been fulfilled beyond our fondest expectations by our Cuckler Building."

CUCKLER BUILDINGS are built with the strength of a bridge, from the finest grade of steel. 100% usable space, wall to wall and roof to floor (no posts or other obstructions). Widths available: 24', 32' 44', 50', 60', 80' and multiples; any length. You select siding, roofing and other materials from the stock of your Cuckler Dealer, for a building tailored to your individual needs. If you're planning to build now or in the future, send for one of the Cuckler booklets that will give you ideas to fit your specific business and your budget.

CUCKLER BUILDINGS ARE SOLD THROUGH FACTORY-TRAINED DEALERS COAST TO COAST

CUCKLER

CUCKLER STEEL SPAN COMPANY
Monticello, Iowa
DR-1

Please send booklets checked: ☐ Industrial Buildings ☐ Commercial Buildings ☐ Institutional Buildings ☐ Agricultural Buildings

NAME

ADDRESS

CITY STATE

ford Research Institute in Palo Alto is only a few hours away by car.

The "triangle" in Research Triangle Park is formed by the University of North Carolina, North Carolina State University, and Duke University. The research labs that locate in this 4,300-acre area will be no more than a 20-minute drive away from one of the three schools. A new non-profit research organization called Research Triangle Institute is also being set up in the park. Because of the proximity of the Triangle to the great textile mills of the South, it would seem to be a natural for manufacturers supporting research associated with fibers and textiles. For example, one of the first companies to announce that it is going to build there is the Chemstrand Corp.

Unusual added attractions

Sterling Forest is an elaborate development which boasts its own music festival, gardens, and lakeside restaurant. Unlike the other developments, it also includes manufacturing plants, although they will not obtrude on the research buildings. The organization will also rent space suitable for smaller labs in a handsome two-story building in the park.

Undoubtedly, more such research parks will be organized. For example, a 760-acre preserve in Rockland County, New York, directly east of Sterling Forest, is being converted into a research park. Known as "The Dells," it will be limited to research activity. Building coverage of land is restricted to 35 per cent of the minimum 10-acre plots.

Towns and counties are also promoting themselves as ideal spots for research, development, and engineering operations. Examples are Fairfax County, Va., adjoining Washington, D.C., and Stamford, Conn.

Once a company has settled on a location for the new research lab, the next problem is layout and design. Here, flexibility is the most important principle to keep in mind, Alonzo Clark of Voorhees, Walker, Smith, Smith, and Hawes, architects, told a DUN'S REVIEW round table. This means flexibility both to handle unanticipated expansion of present projects and to tackle new problems. However, flexibility also means a very low percentage of land utilization at first.

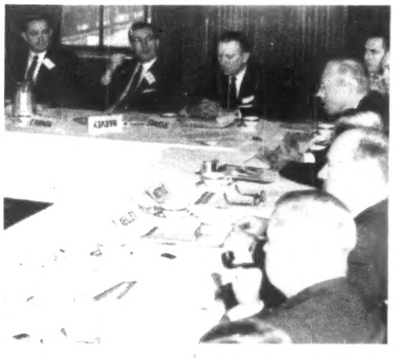
Clark reports that during the planning and rendering stages, plans for practically every research building he has worked on in the last few years have been revised to provide more space. Frequently, within a year or two after the building is completed, new wings or buildings are added.

One way to provide for future expansion is to place expanding research activities in the wings or periphery of the building (see building marked by color in diagram, page 85).

Another common practice is "modular design" — duplicating all services, such as electricity, water, compressed air, distilled water, gas, and so on, every 10, 12, or 15 feet. In this way, new projects can be started in any part of the building. Costly as such flexibility can be, it may be cheaper in the end than rearranging or bringing in utilities after the building is in service.

The high cost of utilities and other special interior features makes research buildings expensive. Kenath Kettle, associate director of design and construction, Union Carbide Chemicals Company, doesn't believe any modern research building can go up for less than $25 a square foot, and "wet" labs needed for chemical research can run as high as $45.

Balanced against the high cost of these necessities, the esthetic features now in vogue don't add much to the total bill. Seymour Whitney, vice president of Walter Kidde & Company tells about a company that was trying to cut the costs of the lab by considering less expensive outer walls. They stopped trying when calculations



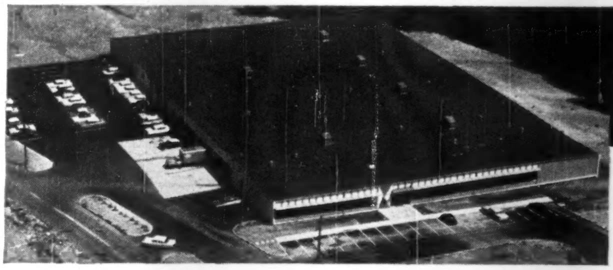
Alonzo Clark *(wearing glasses): "The selection of a site for a research lab is in large part sociological."*

A PLANT

$4.81 per sq. ft.

72,800 sq. ft. Jumbo brick on steel columns. Ceiling height 13'. 100% sprinklered. 37,000 sq. ft. air conditioned. 100% financed by local interests.

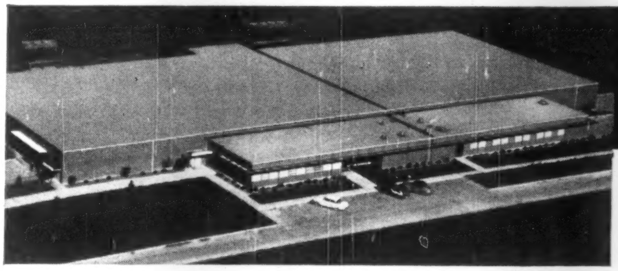
COSTS LESS



$5.11 per sq. ft.

60,000 sq. ft. Steel and masonry construction. Ceiling heights 18'—12'—10'. 100% sprinklered. Office air conditioned. Landscaping and spotlights included in contract.

IN GEORGIA



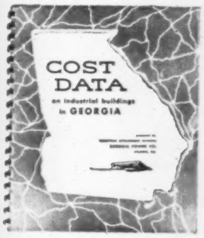
$6.90 per sq. ft.

54,000 sq. ft. Steel and masonry. Jumbo brick, face brick, aluminum curtain walls. 100% sprinklered and air conditioned. Paved parking for 200 cars.

In Georgia, heartland of the rich southeastern market, new factories and warehouses of national concerns are being built at an ever-increasing rate. And they are being built at costs well below those that prevail in other sections, as you can see from the typical examples above.

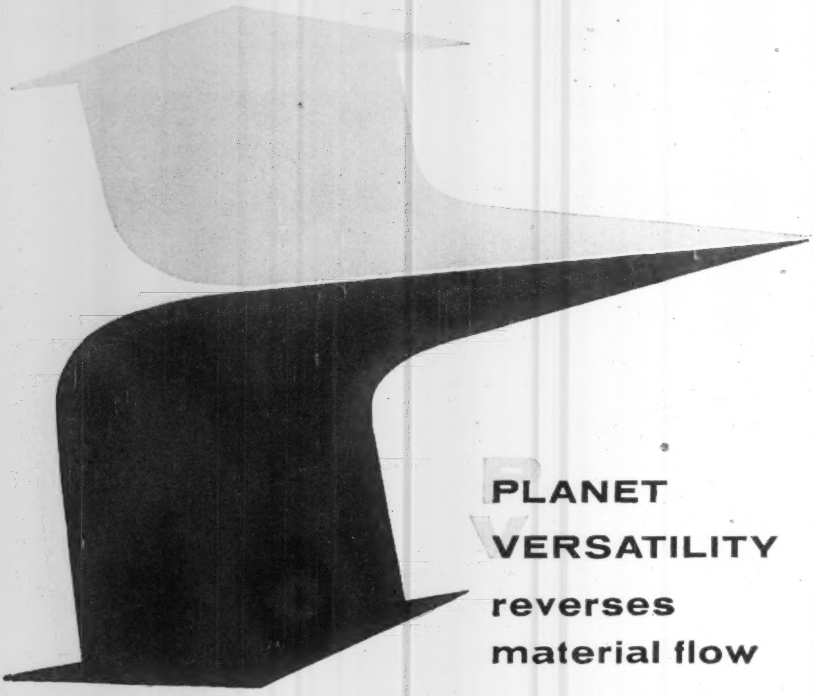
WRITE FOR YOUR FREE COPY

The 1960 edition of our building cost data book contains photographs and complete specifications of many recently constructed plants, together with cost information. You'll find it highly interesting.



E. A. YATES, Jr., Vice President

GEORGIA POWER COMPANY
Industrial Development Division
Box 1719I Atlanta 1, Ga. Phone JAckson 2-6121



PLANET VERSATILITY reverses material flow

COMPLETE MANUFACTURING SYSTEM INSTALLED WITHOUT INTERRUPTING PRODUCTION

Modernizing production and materials handling methods to triple output *without interrupting production* may sound like pulling rabbits out of a hat. *Planet Versatility* has done just this for a leading refractory block manufacturer at a tremendous saving of time and money.

The manufacturers original plan would have transferred the refractory block pattern and mold make-up operations to a new building, leaving the block processing operation in the existing building. This plan, however, would have necessitated many days of downtime while old equipment was being moved and new equipment installed.

After we studied the problem, we recommended the opposite tack: put block processing into the new building, and leave pattern and mold make-up in the existing building. By this plan production was maintained while we installed the new equipment.

When the new system was ready, complete with a new raw material and blending system, the direction of material flow through the plant was reversed. In actual practice it was just that simple; one day operations moved in one direction, the next day it flowed in the opposite direction on the new system. *Not one day's production was lost.*

If your plant has a production, materials handling or automation problem, *Planet Versatility* will save your time and money, and increase your plant's efficiency and production. Why not write or call about our engineering and manufacturing know-how. It has paid leading manufacturers in nearly every industry to plan with Planet . . . *it will pay you too.*

Sales Offices in Principal Cities in the United States and Mexico

PLANET CORPORATION
1835 SUNSET AVENUE, LANSING, MICHIGAN

Engineered Handling Systems • Automation Equipment • Mill & Foundry Handling Equipment

J MARTIN
CLARK

Jay Martin *(left): "For many companies, the trend seems to be to move the research facilities away from the plant or company headquarters."*

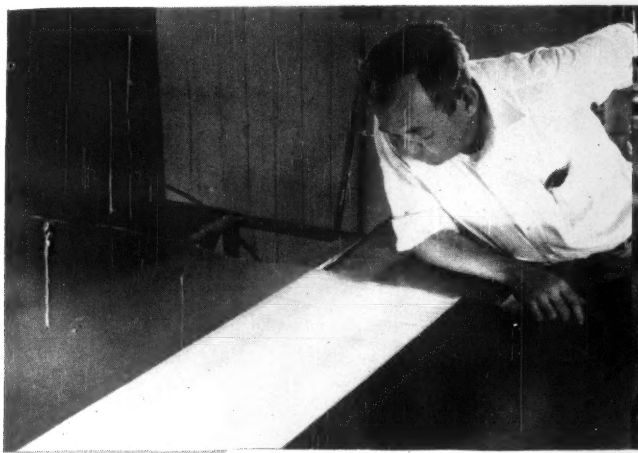
proved that the cost of the building would be reduced only 35 cents a square foot *if it had no outer walls at all.*

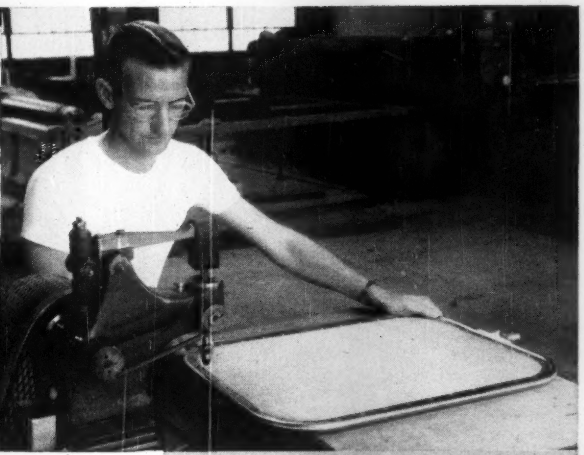
In engineering buildings, the trend is also to more attractive surroundings. Air conditioning is practically mandatory, according to G. A. Heckscher, United Engineers & Constructors, Inc.

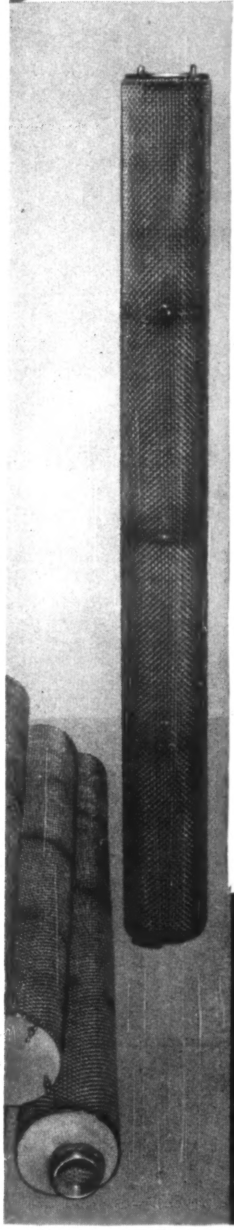
Companies are getting away from huge rooms containing engineers by the acre. The big rooms are being broken up into smaller rooms or at least partitioned off, as shown by the photo on page 86. Ralph Cross reports that the company he heads is applying the modular concept to housing its engineers. No more than 50 engineers work together in one area at Cross Company.

Lighting levels in technical buildings are also rising steadily, Morgan Christensen of General Electric told the DUN'S REVIEW round table. One hundred foot-candles is now common, and 200 is used in many engineering buildings. Wall-to-wall ceiling lights are in wide use.

Old-timers in the business of research and engineering love to reminisce about the days when they worked in garages or unused corners of plants. Those days are now history. If a manufacturing company wants to attract the top-notch researchers and engineers needed to insure growth in the coming decades, it must start with a stimulating physical environment. Attractive, functional surroundings aren't enough without intelligent leadership, but without them you're out of business before you start!







Who cares about your Wire Cloth Fabrications?

CAMBRIDGE does . . .

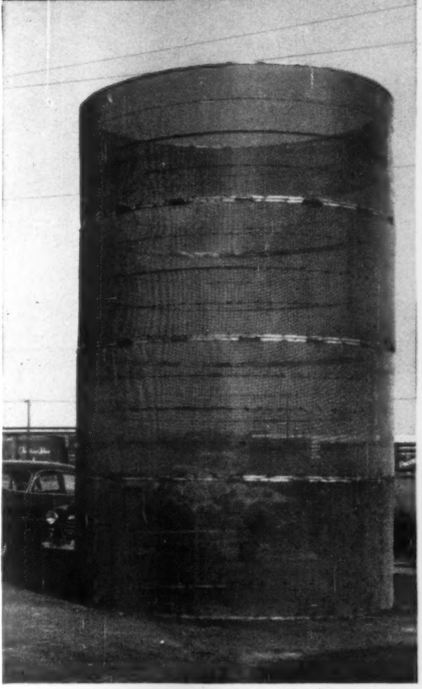
that's why you automatically get service with your order . . . whether you need dozens of midget strainers or a single giant-sized retaining screen.

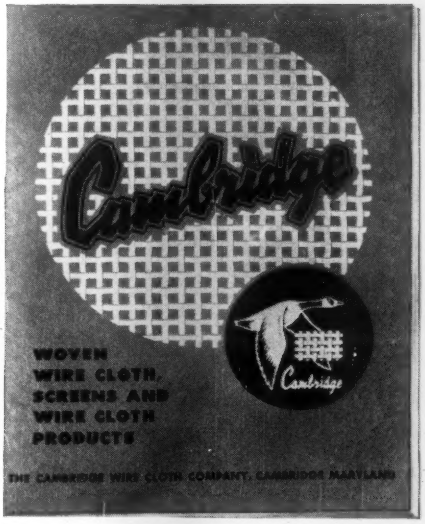
Careful, competent workmanship and constant inspection assure you of quality . . . modern machinery and accurate scheduling assure you of prompt delivery. And, a Cambridge Field Engineer follows up your order to make sure our product is giving you the best possible service. Let us quote on your next order for wire cloth fabrications. We manufacture wire cloth from any metal or alloy—including titanium—in nine basic weaves. We'll work from your prints or draw up prints for your approval. Call your Cambridge Field Engineer . . . he's listed in the yellow pages under "Wire Cloth". Or, write for FREE 94-PAGE CATALOG.

The Cambridge Wire Cloth Co.

Department Y • Cambridge 3, Md.

Manufacturers of Wire Cloth,
Metal-Mesh Conveyor Belts, Wire Cloth Fabrications

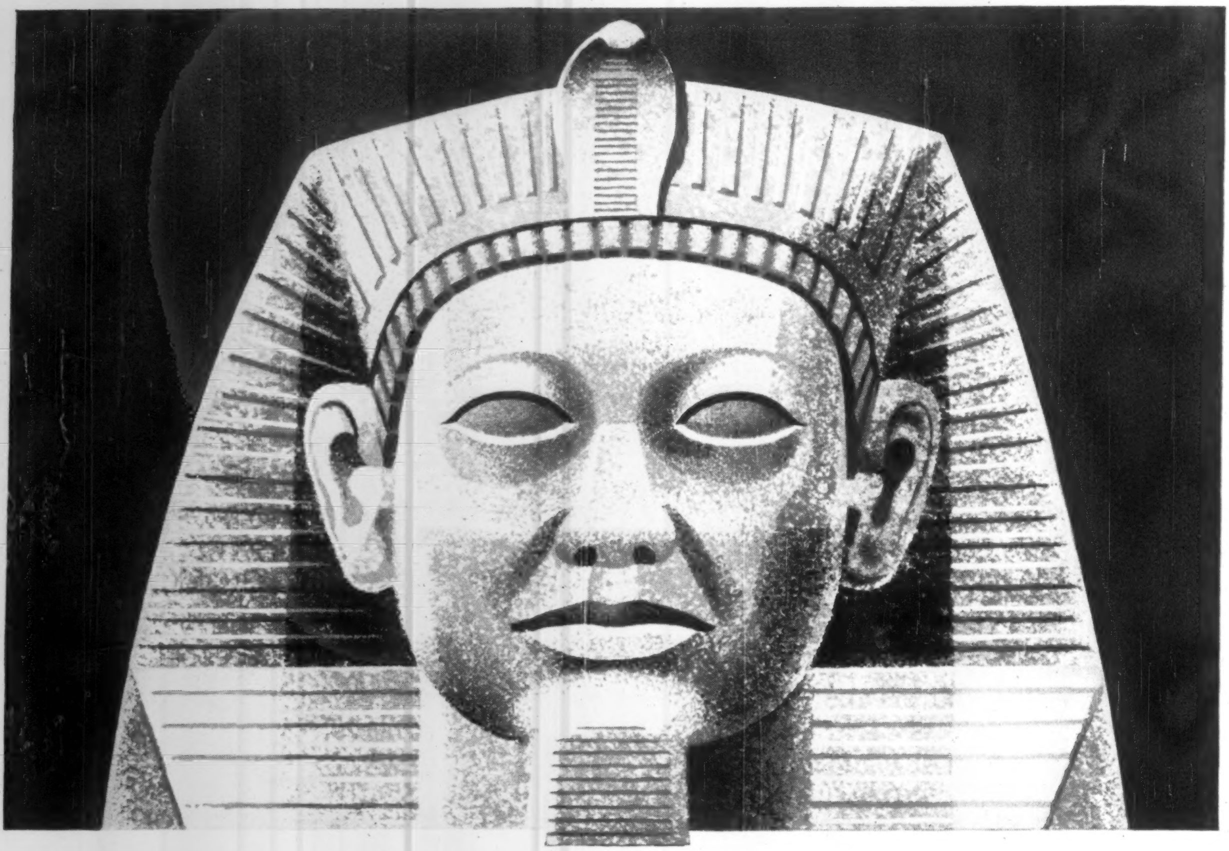




Cambridge

WOVEN
WIRE CLOTH,
SCREENS AND
WIRE CLOTH
PRODUCTS

THE CAMBRIDGE WIRE CLOTH COMPANY, CAMBRIDGE MARYLAND

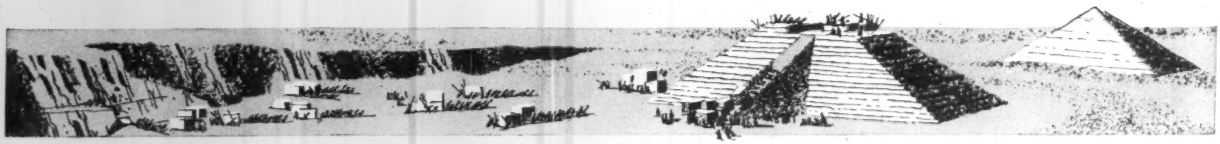


SUCCESSFUL PLANT SITE CHAIRMAN!

Cheops, Egyptian Pharaoh, was a bit of a stinker, but his organizational ability cannot be doubted. He decided to build a pyramid—the biggest. The site—Gizeh; materials—limestone locally quarried; labor force—100,000 men in three-month shifts. The market—himself.

The pyramid business has fallen off badly, but old Cheops' method of procedure still holds good. Deciding what is to be accomplished and orienting other factors to the efficient fulfillment of this need is logical. In plant site selection it is paramount.

When your industrial needs have been established, the Chicago and North Western Railway can be of the greatest assistance. With precise requirements in mind, experienced staff members match your specifications to the facts concerning locations. If the facts are lacking, we'll find the answers. Result: site recommendations keyed to your company's needs rather than a welter of "just-might-possibly-do" real estate parcels. This process saves effort, time, expense.



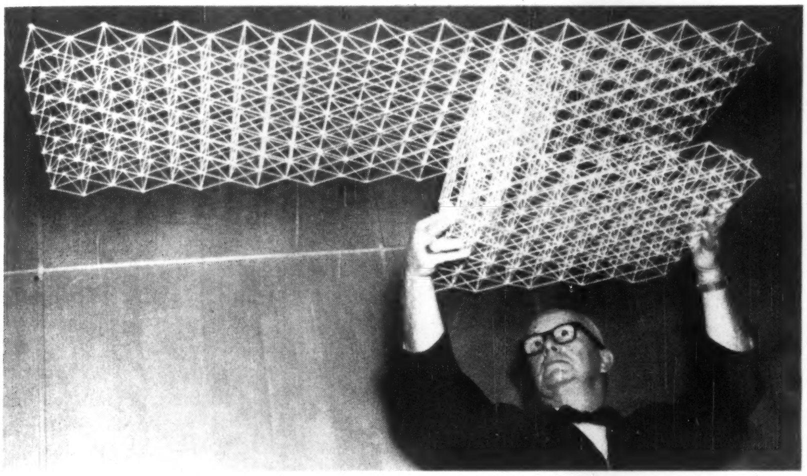
Are you looking for a plant site? If so, submit your requirements to us. Inquiries held in Sphinx-like confidence. Address: ***Gene F. Cermak, Industrial Development Department, Chicago and North Western Railway, 400 West Madison, Chicago, Illinois.***

Warehouses:

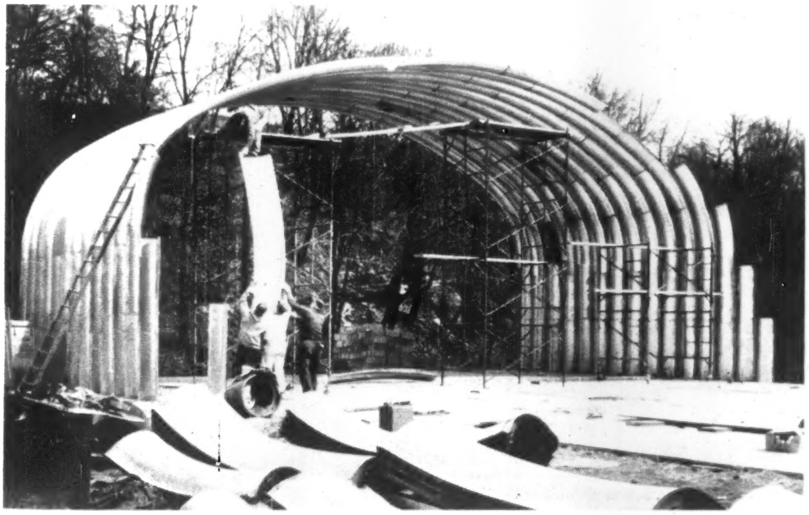
Designing for Flexibility

A few weeks ago, Richard H. Tatlow, III, president of Abbott, Merkt & Company, engineers, dazzled a national trade association with a story about the push-button warehouse of the future. According to Tatlow, it will have no aisles, no tractor-trailers, no fork-lift trucks or allied equipment—and very few workers. A computer will direct the transfer machinery and keep track of all paperwork.

Unfortunately, for most manufacturing companies this warehouse is



WAREHOUSE CONSTRUCTION OF THE FUTURE: *In their search for low-cost, easy-to-build, easy-to-dismantle warehouses, many manufacturers may turn to radical new concepts such as those advanced by R. Buckminster Fuller. He is displaying a model of his "octet truss" style of cantilever construction. A lightweight, all-aluminum full-size version was constructed at the Museum of Modern Art, New York.*



MOBILE WAREHOUSE: *No longer needed at its present location, this warehouse is being dismantled for re-erection at a new site. Shifting markets and maturing distribution concepts are stimulating manufacturers interest in such easily-taken-apart structures as this Wonder Building. Most structures of this type are made of steel.*

Blue Points
or
Blueprints?

It's not so much a question of *which* as it is a question of *which order*. Today's employee and executive restaurants demand skillful and efficient planning —and management.

Whether it be executive dining room, employee cafeteria, or both—Slater Food Service Management, most experienced organization in the field, will study your needs and design facilities to fill your individual requirements. A Slater study is entirely objective. Recommendations are never capricious or arbitrary. Slater does not sell equipment—is solely interested in food service management. May we suggest an informal chat at an early stage of your planning?

SLATER

FOOD SERVICE
MANAGEMENT

PHILADELPHIA 46, PA.

PHILADELPHIA • NEW YORK • BALTIMORE
CHICAGO • ATLANTA • DANVILLE, VA.
LOS ANGELES

SEE a demonstration by a specialist

"OUTDOOR FRESHNESS" FOR WASHROOMS

for FREE demonstration or literature address:
WEST CHEMICAL PRODUCTS INC., 42-17 West St., Long Island City 1, N. Y.
Branches in principal cities • IN CANADA: 5621-23 Casgrain Ave., Montreal

WEST CHEMICAL PRODUCTS INC.

PLANNING EXPANSION?
WEST VIRGINIA
offers you all the advantages!

A West Virginia location offers plants a "package" of advantages . . . its proximity to great centers of population—within 500 miles of 4 out of 5 largest U. S. Markets—is backed up by real production advantages . . . an available supply of versatile workmen, ample power, great coal reserves, natural gas, a fine transportation system, cooperative communities, an equitable tax situation. West Virginia has the competitive advantages you need. Investigate!

For information write:
Don Crislip, Executive Director, West Virginia Industrial and Publicity Commission, State Capitol Bldg. Room D1, Charleston 5, West Virginia.

the businessman's State . . . .
WEST VIRGINIA

SO E-E-Easy Goin'

There's economy and efficiency in every move a Magliner Floor Truck makes! Magliners eliminate dead weight . . . increase output . . . cut handling costs! Made of magnesium—world's lightest structural metal—Magliners weigh as little as 40 lbs., are capacity rated to 2,000 lbs., *more* if required. Pound for pound, dollar for dollar, load for load . . . easy-going Magliners are your best buy!

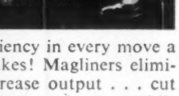
Standard models available include platform trucks, shelf trucks, utility trucks, box trucks, etc.—a lightweight Magliner for every job!
Tell us your requirements.

WRITE FOR FLOOR TRUCK BULLETIN

MagLiner

Magline Inc.
P.O. Box 303
Pinconning, Mich.

MAGNESIUM FLOOR TRUCKS

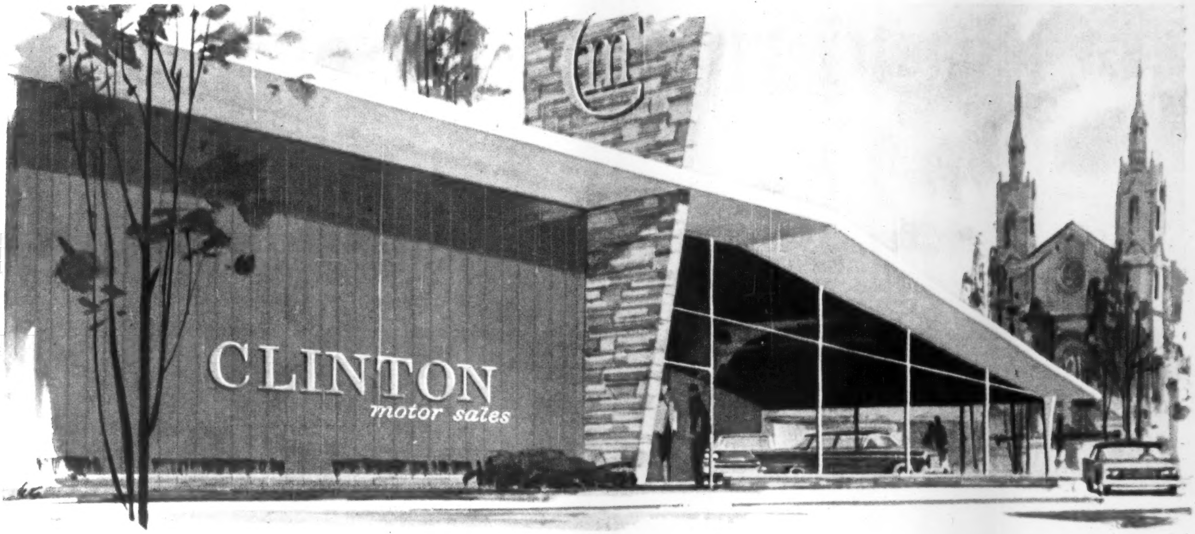


not only technically off in the clouds, but economically out of this world. Tatlow was addressing a group of department store executives, who have different warehousing problems than manufacturers. Even so, he warned them "not to hold your breath" waiting for these 1984 warehouses to materialize.

The big difference between a warehouse for a retail outlet and one a manufacturer puts up is that the retailer's "territory" is pretty well fixed. For most manufacturers, the markets are shifting so fast and distribution concepts are maturing so rapidly that they can't afford to put up high-cost, completely automated warehouses. The building doesn't stay the same size in the same place long enough to pay for highly specialized equipment. The entire problem is complicated by the growing practice of expecting the supplier to carry more and more of the customer's inventory.

The manufacturer's problem is illustrated by a statement made at one of the DUN'S REVIEW round tables by George V. Evans of International Latex Corp. He said: "We try to buy materials handling equipment (for warehouses) that we can junk in three years." Evans' remarks were seconded by a top executive of a materials handling manufacturer. Edward E. Shile of Palmer Shile Company said

PLASTIC IGLOO: *Another of Fuller's advanced concepts applicable to warehousing is the "geodesic dome." This example is a radome lent by Lincoln Laboratories of the Massachusetts Institute of Technology to the Museum of Modern Art.*



STRAN-STYLE

Meet the new Stran-Style Buildings—New sparkling beauty, low-contour design that says smartness for your business. Colorful, functional, using modern materials in exciting new ways, they complement any location, go up fast, and cost less than you'd expect.

STRAN-COLOR

Nine bright new Stran-Satin wall and roof colors are baked on at the factory—a multi-layer protective coating of vinyl-aluminum over galvanized steel. Use singly or in any combination.

STRAN-SPEED

Shortages needn't delay your building or expansion plans—not when you can get immediate delivery of the new Stran-Style or other complete Stran-Steel buildings from your nearby Stran-Steel dealer. A phone call gets things started today.

STRAN-SAVINGS

Proved, practical modular design assures ease of expansion any time and easy expansion with a reasonable price tag for a high quality building. And you'll add savings in time to the basic economy of Stran-Steel pre-engineered buildings, because they go up in weeks, not months. For complete information, fill in and mail the coupon.

STRAN-STEEL

Clip coupon and mail to STRAN-STEEL CORPORATION, DEPT. DR-5, DETROIT 29, MICHIGAN

Stran-Steel®

Please send complete literature on Stran-Style Buildings in Stran-Satin Color. I'm interested in a building approximately ______ ft. by ______ ft. to be used for ______

Name ______ Title ______

Company ______ Phone ______

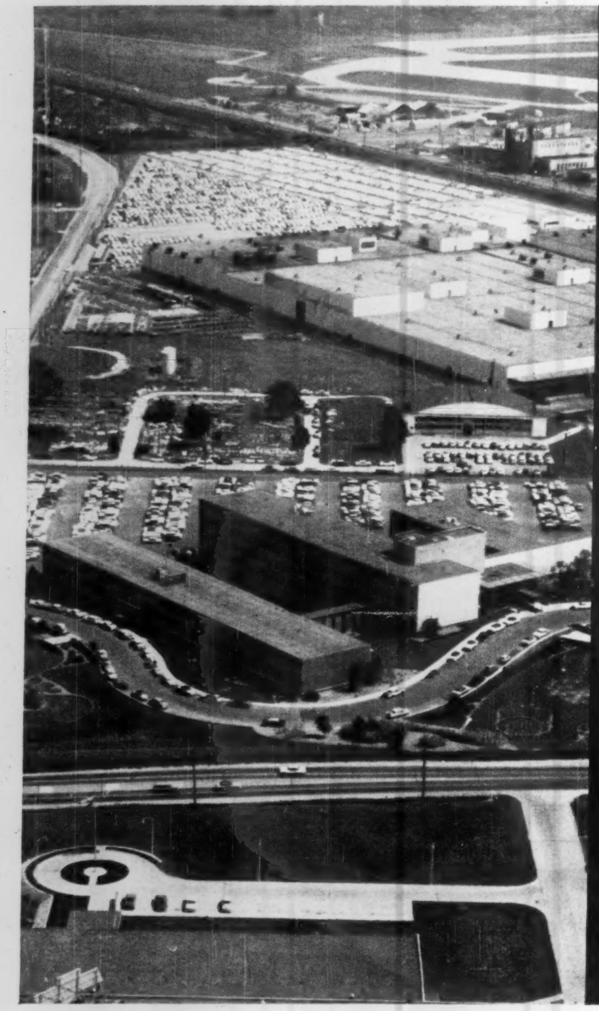
Address ______ County ______

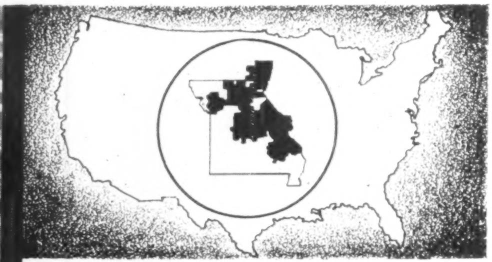
City ______ Zone ______ State ______

STRAN-STEEL IS A DIVISION OF **NATIONAL STEEL CORPORATION**

New industry thrives in excellent business climate of the St. Louis area

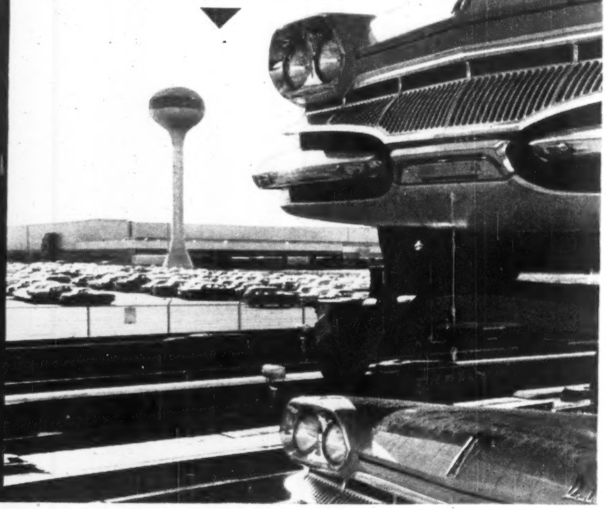
...the Strategic Center of America





Industrial Growth—McDonnell Aircraft's phenomenal growth, from two employees in 1939 to 23,000 topflight engineers, technicians and workers, was accomplished easily with this area's manpower.

New Industry—Chrysler's newest and finest assembly plant in St. Louis will save millions of dollars annually in transportation costs from this strategic central location.



Union Electric... expert help in site selection

Union Electric Company—one of the nation's largest electric utilities—serves an area of 19,000 square miles at the center of the nation on the world's greatest inland waterway.

Union Electric Industrial Development Engineers can help you with site-location information.

Our close relationship with our industrial customers and the communities we serve gives us an intimate knowledge of the economy and civic organizations of this area. You can depend upon competent and confidential treatment of your inquiries by our Industrial Development Division.

Telephone or write...

J. E. Johanson, Manager, Industrial Development

UNION ELECTRIC COMPANY

St. Louis 1, Missouri ◦ Phone: MAin 1-3222

that his customers are demanding materials handling for warehouses that is either portable or can be taken down and erected elsewhere.

Changing distribution concepts are also affecting the warehouse. Many companies have stopped looking at the warehouse as a distinct entity. Instead, they look on the warehouse as one step in the ladder that leads to the customer. Viewed in this light, many companies have given up a narrow striving to hold down warehousing costs. Instead, they are aiming at a higher objective—greater market penetration. If this means a costly abandoning of a partially-amortized warehouse—well then, the piper must be paid. Evans calls this "optimizing" the warehouse function, as contrasted to "maximizing" warehouse expenses under the older concept.

In the pursuit of new, efficient distribution methods, the General Foods Corp. has abandoned two million-dollar warehouses built only ten years ago and is spending $18 million a year over a three-year period to build new ones, according to E. W. Kelley of General Foods.

The effect of these changes in warehousing concepts is to obsolete the solidly constructed warehouse of the past. If a company isn't sure it will need a certain warehouse in a certain size in a certain location in five years, it wants to invest as little as possible

COUNTERTREND: *Many manufacturers, particularly of industrial products, are consolidating other functions with warehousing such as data-processing (above), sales offices, packaging, service and repair, light assembly, and customer training. Obviously, such multi-function buildings cannot be dismantled and re-erected elsewhere.*

learn how DUO-FAST Staplers · Tackers · Nailers can save you money

Thousands of industrial plants are finding the cost cutting solution to their fastening problems in the DUO-FAST Line.

Whether it be a nailing job, a problem of stapling corrugated, assembling wood parts, or doing a fastening operation in a hard-to-get-at place—there is a DUO-FAST tool to do the work and save you money in the process.

A trained staff of stapling experts, working out of more than fifty DUO-FAST offices, are eager to assist you. They may be able to cut your production costs.

DUO-FAST Staple Nailing beats hand nailing 5 to 1 on assembling wood frames, expendable skids, making up shipping crates, etc.

DUO-FAST Air Tackers are small, easily portable units that are doing a whale of a production job for a whale of a lot of industrial plants.

If you can't take the work to a stationary stapling device, take the stapler to the work as shown here. The DUO-FAST Air Plier is a fine problem solver.

Many jobs can be speeded with DUO-FAST Gun Tackers and Hammer Tackers like attaching a protective liner to a crate as shown here.

Send for the address of your DUO-FAST representative and a copy of the helpful DUO-FAST Stapler, Tacker, Nailer manual.

FASTENER CORPORATION 3758-68 River Road, Franklin Park, Illinois

0271

DUO-FAST Staplers Tackers Staples

Everything you need for tacking, stapling and nailing.

B&O SENTINEL SERVICE

B&O Sentinel Service FAST FREIGHT

can double your satisfaction with carload freight service

① Sentinel Service offers dependable schedules on carloads, *siding-to-siding!*

② New... DOT... reports car movements, *terminal to terminal,* to your B&O representative around-the-clock. Be fully informed whether you're a shipper or receiver. *Ask our man!*

B&O BALTIMORE & OHIO RAILROAD

Constantly doing things—better!

INDUSTRY'S PLANT

in the building and equipment.

The perfect solution would be a building that could be dismantled and erected elsewhere at minimum cost. Such buildings already exist (see photos, pages 97 and 98), and more will no doubt be available soon.

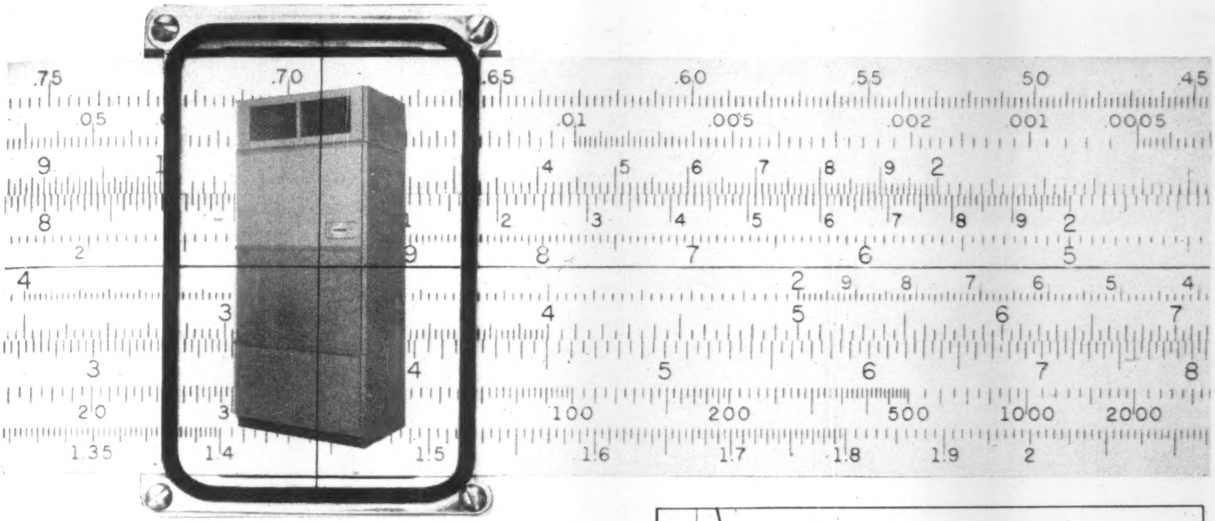
The important countertrend to this type of "flexible" warehouse is the consolidation of several other functions with warehousing in one large building. Many companies are building warehouses which also house administrative offices, district sales offices, customer training, repair, branding, packaging, sales promotion, accounting, and even light assembly operations. In some cases, the distribution function is set up as a separate corporation that "owns" the multi-function building.

Obviously, any building which houses so many activities is too expensive to be pulled down and re-erected elsewhere. Construction of such buildings implies a reasonable stability of market and distributing concept. Significantly, most of the companies erecting such multi-function buildings are manufacturers of industrial products, generally less subject to the vicissitudes of customer tastes.

A good example of a multi-function building is the "Unicenter" recently opened by Raytheon Manufacturing Company in Westwood, Mass. From this one building, Raytheon distrib-

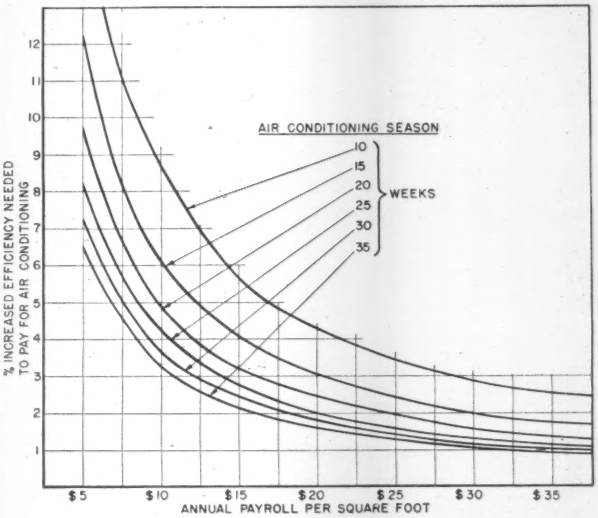
SCHLESSEL
CANNON

Philip Cannon *(middle): "To avoid a massive investment in plant and machines, many companies with seasonal sales patterns such as Procter & Gamble and Lily Tulip are letting the warehouse bear the burden of achieving stable plant employment."*



NEW COST-PER-SQ. FT. FORMULA SHOWS YOU HOW SOON

TYPHOON AIR CONDITIONING PAYS FOR ITSELF!



Send for details today! *Learn how you can calculate the exact percentage of increased production needed to pay full costs of owning and operating a Typhoon Air Conditioning System.*

You'll be amazed at how small an increase is needed – *approximately 2% for general factories,* depending upon the size of the area to be cooled. And records prove production *goes up 22%-28%* after Typhoon installation! Absenteeism drops! Errors are reduced! Labor-management relations improve!

Don't let financing problems stop you from finding out more! Typhoon's new installment and leasing plans offer you a choice of methods to save working capital – even gain tax benefits. Investigate today! Get Free Cost-Calculating Formula! *See Your Typhoon dealer or use the coupon below.*

TYPHOON
DIVISION OF
HUPP
Corporation

TYPHOON AIR CONDITIONING DIVISION, HUPP CORPORATION 13-C
505 Carroll Street, Brooklyn 15, N. Y.

☐ *Please send cost-formula and literature.*
☐ *Have representative call for an appointment.*

NAME____

FIRM____

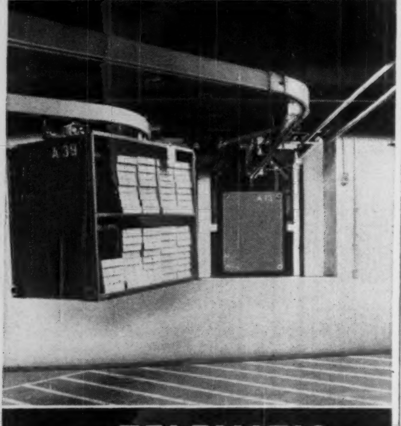
ADDRESS______________________________________

CITY____________________ZONE_____STATE__________

Power -Flex

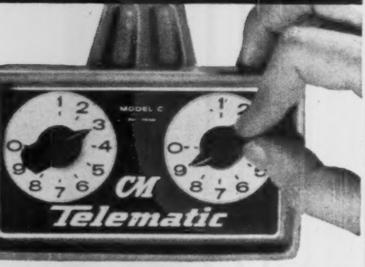
POWER AND FREE

OVERHEAD CONVEYOR SYSTEM*

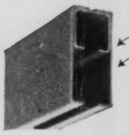


WITH TELEMATIC

AUTOMATIC DISPATCH CONTROL



• Simply set dials and Telematic guides carrier to any station in system



Employs exclusive unitized "over and under" power and free rail which permits simple switching to right or left as desired.

Power-Flex is designed for automated materials forwarding applications in industrial plants, distribution centers, service buildings and department stores. The most economical system available for loads up to 600 lbs. per carrier. Savings in actual installations range from 25% to 60%.

*Systems in service for your inspection.

Engineered to your very specific requirements.

SEND FOR BROCHURE

Inquiries from your engineers or consultants welcomed.

CM
Power-Flex system

CM CONVEYORS

COLUMBUS McKINNON CHAIN CORPORATION

Conveyor Division

TONAWANDA, N.Y.

utes its radio tubes and transistors to the entire country by air freight (see "Boosting Sales with Fast Delivery," DUN'S REVIEW, February 1960.

The tubes arrive at the building in bulk from a nearby manufacturing plant. The tubes are first tested, then branded, and finally packaged five to a box before going into inventory.

The manager of this operation and the district salesmen have their offices in the building. In addition, all accounting, billing, and sales analysis for these products is performed on a bank of punched-card machines (see photo on page 101). Sales promotion materials are prepared in another department. An attractive cafeteria rounds out the picture.

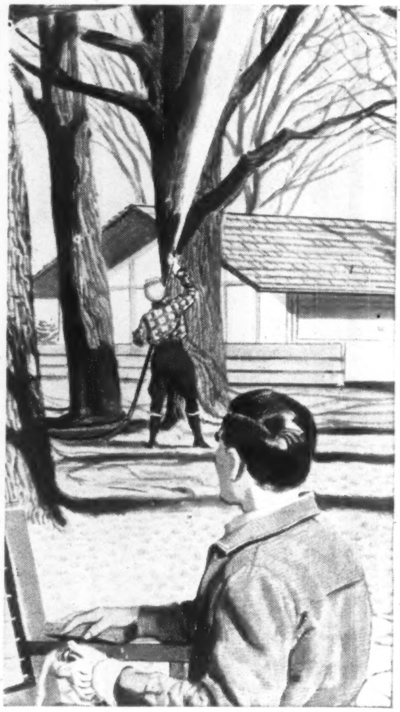
Since so many companies are changing the nature and function of their warehouses, it is not too surprising that companies don't call them warehouses any more. In fact, "warehouse" is fast becoming a dirty word.

According to Ralph S. Crumme of Abbot, Merkt, to many people the word "warehouse" connotes an old building, manned by low-grade personnel, performing a static or passive operation. Many companies now favor "service center" or distribution center." Another variation is "customer service center." These titles are said to attract better personnel.

Some manufacturers with highly automated plants and seasonal sales patterns are sticking to the old type of warehouse. The reason is that in order for automated or highly mechanized equipment to pay off, it must be operated all year round—sometimes on two or three shifts. If the product has a seasonal sales pattern, warehousing the output in the off-season is essential. This practice also promotes steady, year-round employment.

Since this type of operation does not call for any "live" inventory, the manufacturer wants to spend as little as possible on warehousing and in fact, may only rent storage space for as long as it is needed.

The warehouse made of flexible rubber and supported only by air pressure may be another low-cost answer to the temporary storage problem (see DUN'S REVIEW, August



First—have your lovely trees sprayed ...by Davey

Before you even start to clean up your outdoor living room this spring—protect your precious trees! Spray!

Right now, before the leaf buds burst, good spraying can protect your trees from the ravages of scale insects. If Dutch Elm disease is in your area, spraying right now —before the buds burst—is most important. When you're basking in the lush, full foliage of summer shade, you'll be glad you had Davey tree care *early*. So many ailments can be avoided if treated in time by experts trained the Davey way.

No better time than right now to have Davey give your trees an early spring-tonic treatment: feeding, pruning, and spraying.

Start your happy summer memories now with Davey t.l.c., tree-loving care—look up DAVEY TREE SERVICE in your phone book or write

DAVEY TREE EXPERT CO.

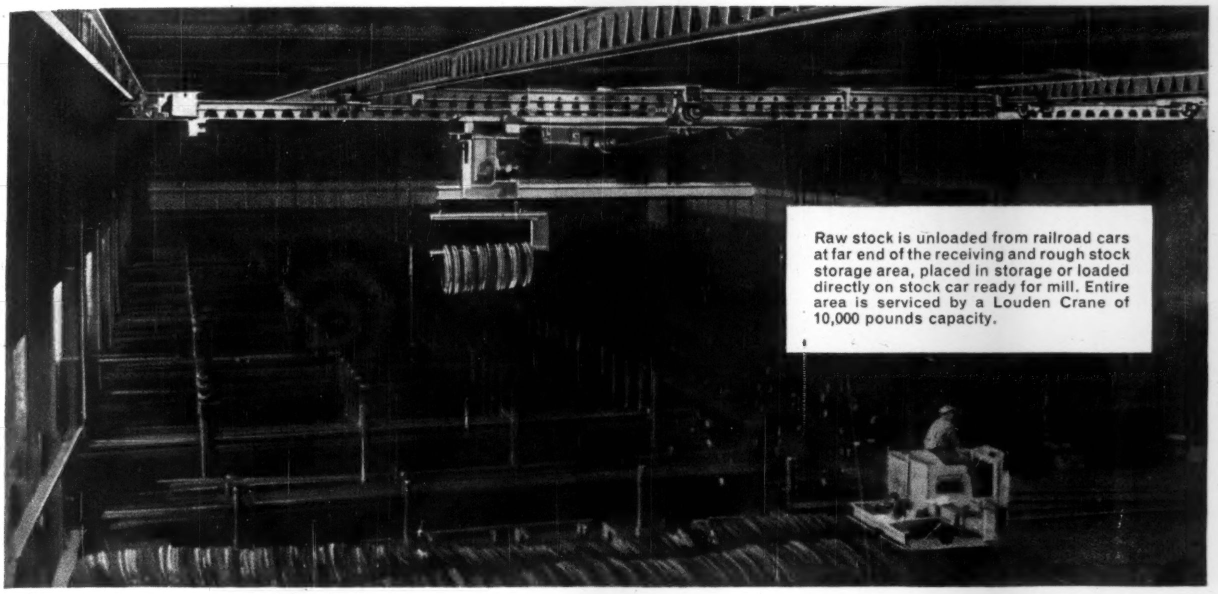
Kent 15, Ohio

MARTIN L. DAVEY, JR.

President

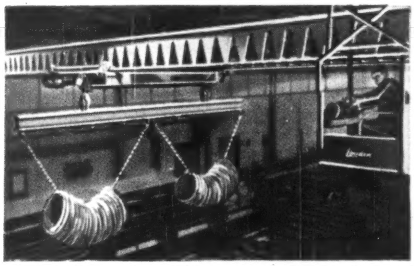
DAVEY TREE EXPERT CO.

THE OLDEST AND LARGEST TREE SAVING SERVICE IN THE WORLD

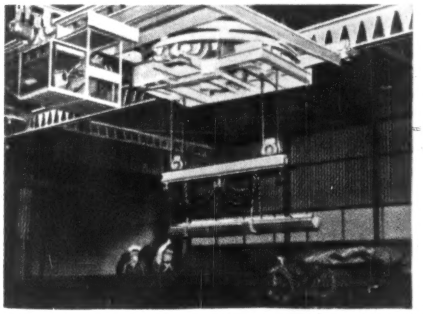


Raw stock is unloaded from railroad cars at far end of the receiving and rough stock storage area, placed in storage or loaded directly on stock car ready for mill. Entire area is serviced by a Louden Crane of 10,000 pounds capacity.

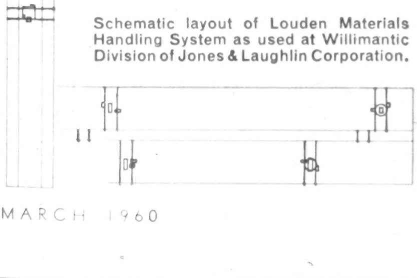
CUT COSTS from the start



Louden Cranes in mill move material through production steps. Here coils have just been removed from acid tanks. Four Louden Cranes handle operations throughout the mill. Two transfer bridges and interlocks provide complete flexibility.



Finished material is placed either in storage or loaded directly into trailers for shipment.



Schematic layout of Louden Materials Handling System as used at Willimantic Division of Jones & Laughlin Corporation.

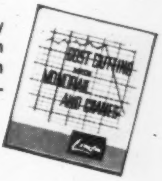
At the time the Jones & Laughlin Steel Corporation was considering a new plant at Willimantic, Connecticut, a structural engineering firm made a complete study and the results are of unusual interest.

By using an underrunning crane system, it was found that a substantial savings in building and crane costs would be realized, and since this system provided the required effective hook distance at a lower ceiling height, an additional saving in building cost could be obtained. From the start, costs were cut.

All of this points to the one reason why people buy Louden Materials Handling Systems . . . *to make more money*, via economies, expedited handling, much more productive use of manpower and floor space and through sheer increased production. Louden has the equipment, the engineering and the experience. It has pioneered many developments now standard practice in the industry.

When you have plant requirements involving lifting and transporting loads, call on Louden for suggestions. Louden's unparalleled experience and proven engineering leadership combined with Louden's broad line of equipment can save time and mistakes. Write or wire today.

NEW **. . . 52 pages of illustrated applications . . . industry by industry. Get the latest and most complete information on planning and equipment selection for the best in modern materials handling. Write today for your copy "COST-CUTTING WITH MONORAIL AND CRANES."**



Louden MONORAIL & CRANE

THE LOUDEN MACHINERY COMPANY
304 Broadway, Fairfield, Iowa
A Subsidiary of Mechanical Handling Systems Inc.

SINCE 1867 . . . THE FIRST NAME IN MATERIALS HANDLING

"I'm a Burns Guard.

"I'm thoroughly trained
in Plant Protection.

"I'm also trained in
fire prevention and first aid.

"I'm in excellent health.

"I serve as a constant warning
to potential wrongdoers.

"I'm available at an hourly
rate...which covers
all of my fringe benefits!

"I can save you 20% on your plant protection costs!"

Let us show you how the Burns Security System can save you 20% on your plant protection force. A phone call, letter or wire will put a Burns Security Specialist at your service. Meanwhile our brochure, "It Takes More Than Fences", is yours for the asking.

Offices in principal cities SECURITY BURNS SERVICES *throughout the world*

THE WILLIAM J. BURNS INTERNATIONAL DETECTIVE AGENCY, INC. • EXECUTIVE OFFICES: 101 PARK AVE., NEW YORK 17, N. Y.

1959, page 80). The plastic "cocoon" building is another possibility.

The growth of a genuine world market is putting new emphasis on the warehousing and distributing function in industry. So many American manufacturers are acting as importers and distributors of foreign-made goods that the distributing function may one day be thought of as coequal with manufacturing. That is, of course, if the rapidly shifting domestic market has not already had this effect.

To solve their distribution and related problems, manufacturers will be receptive to unusual new construction techniques. The old four-square warehouse is likely, in the coming decade, to be metamorphosed into a greater variety of shapes and sizes than any other type of building in the plant complex. —M.M.

INDUSTRY'S PLANT

How to Plan a Service Center

In many industries today, competition is centered primarily on delivery and service. This is particularly true in industries where product differences are slight or where fast and expert servicing is required to keep the product in steady operation. An important element in both prompt delivery (see "Boosting Sales with Faster Delivery," DUN'S REVIEW, February 1960) and prompt and satisfactory service is the proper location and design of buildings housing these functions. Here is how one company solved its service problems by consolidating its functions under one roof.

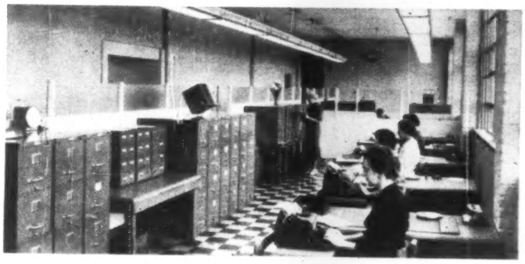
For several years, the management of Yale Materials Handling had been aware that it had a service problem in Chicago.

First of all, service trucks tearing off on emergency missions to adjacent counties were often caught in Chicago's hideous loop traffic jams (see "Crisis of the Cities," DUN'S REVIEW, February 1960). And secondly, the bustling, growing local service force of this division of Yale & Towne Manufacturing Company was bursting the seams of its rented space in downtown Chicago.

While hunting for suitable new

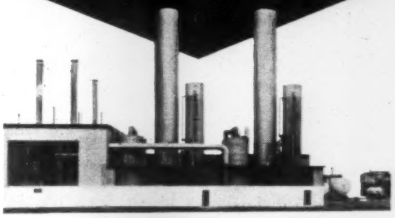
YALE
BERGSTROM
MOTOR
SERVICE
Chicago

UNLOADING *of industrial trucks sent in for repairs is speeded because the building, unlike the former rented space, has unloading docks. They are equipped with self-leveling dock boards.*



OFFICE SPACE *was enlarged and modernized to house the hoist sales staff as well as the district materials handling sales and service staff.*

General Dynamics chooses West-Central Ohio for its Compressed Gas Plant

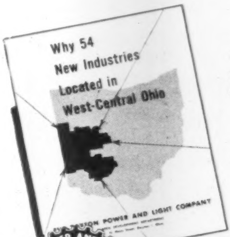


Here's why:

"Abundant underground water, excellent major rail connections, adequate highway network, centrally located to service markets, and increased industrial growth of this area were among the many reasons for selecting Urbana, Ohio, as the site for our compressed gas plant."

C. B. Brisendene, Adv. Mgr.
General Dynamics Corp.
Liquid Carbonic Division

Ask your secretary to send for this informative booklet giving the reasons 54 new industries have recently moved to West-Central Ohio.



Send for your free copy today!

THE DAYTON POWER AND LIGHT COMPANY
AREA DEVELOPMENT DEPT.
25 N. Main St., Dayton 1, Ohio

Send a free copy of "Why 54 New Industries Located in West-Central Ohio."

Name________
Firm________
Address________
City________ Zone____ State________
2

KELLEY DOCKBOARDS CUT COSTS 20% FOR CHEESE CO.

"Down went dock operating costs, up went use of valuable power equipment, when we installed Kelley Hi Lo Dockboards," reports R. G. Bush, Chief Engineer at Schreiber Cheese Co., Green Bay, Wis.

In his letter to a prospective Kelley purchaser Bush exclaimed, **"Kelley Dockboards have more than paid for themselves! Our men *look* for ways to load trucks with powered equipment today. Previously, the use of loose dock plates made them reluctant to use powered equipment going in and out of trucks because dock plates could easily slip out and cause a serious accident.**

All in all, Kelley Dockboards are one of the best investments we've ever made. And, their Dockboards are truly *trouble free!*"

ADJUSTS 6 WAYS MECHANICALLY!

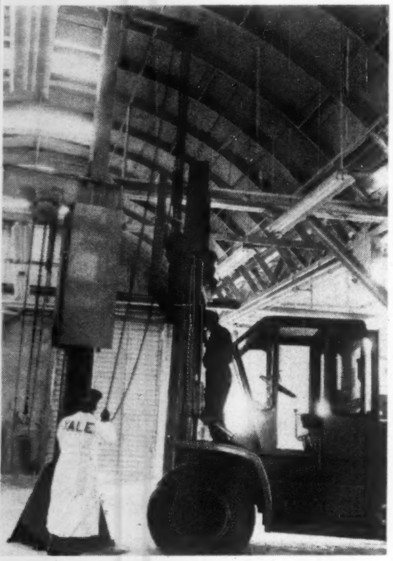
ADJUST-A-LIP moves up, down, in and out of truck beds above or below dock level. TILTS Right or Left (to compensate for canted trucks).

FREE Get the FACTS! Send for details TODAY!

☐ FREE KIT — "How to Plan a Profitable Truck Dock Operation."
Get booklets on Dock Safety, Modernizing, Levelation Data, Dock Designs, etc.
☐ FREE SURVEY — No obligation.
☐ Facts and Figures — Get Bulletin titled "How to get an ADJUST-A-LIP for $1.00 a day."

Tear out and attach this coupon to your letterhead. Sign your name and mail to:

HI-LO Adjustable DOCKBOARDS
KELLEY COMPANY INC.
2131 W. MILL ROAD
MILWAUKEE 9, WISCONSIN



CEILINGS *in former factory were high enough to permit installation of hoists that can handle the tallest Yale industrial trucks. The floors are also strong enough to support the large machine tools used.*

quarters, the management examined the former Yale & Towne Powder Metallurgy Division plant in the suburbs. This plant had been leased to a powder-metallurgy fabricator.

Inspection of the modern one-story plant showed that it had many promising features: office space, loading docks, high ceilings, and strong floors. Best of all, it was close to a number of main highways, truck and rail terminals, and an airport. By taking advantage of the termination provisions of the lease, the Yale Materials Handling Division took over the plant.

In addition to room for various machine tools and large cleaning devices, the building contains office space for the local salesmen. It also houses the district sales office for the parent company's line of hoists. The office space was extensively renovated and new partitioning erected.

There is room within the building for about 12 to 15 per cent expansion. If necessary, the structure can be expanded to the rear at the sacrifice of the presently more than ample parking space.

Converting: Pros and cons

Yale & Towne's solution to its problem is unusual. Not many companies have suitable real estate so handy. But this case history does show how a company can adjust to changing markets and save hundreds

CAN YOU LOOK AROUND EVERY CORNER?

Blonder-Tongue's years of experience and hundreds of installations have earned them the title of authorities on industrial television. They know that in every plant, there exists at least one situation where a system for remote observation can make it safer for your employees, can reduce costs or speed production, protect merchandise, or transfer workers to other tasks. Look around you. Chances are you can see an application for a TV camera. It doesn't require too much imagination, just some foresight and cost analysis.

Write or call today for illustrated case histories, ITV Packet 360. Or, if you wish, we can arrange a FREE on-the-spot TV camera survey to show you how to save money, save lives, and build modernization into your plant.

B-T LABS
BLONDER-TONGUE LABORATORIES, INC.
Dept. DR-3 9 Alling St. Newark 2, N.J.
In Canada: *Telequipment Mfg. Co. Ltd., London, Ont.* Export: *Morhan Export Corp., New York 13, New York*

SITE SEEING?

Get award-winning book telling of

424 *Industrial* SITES

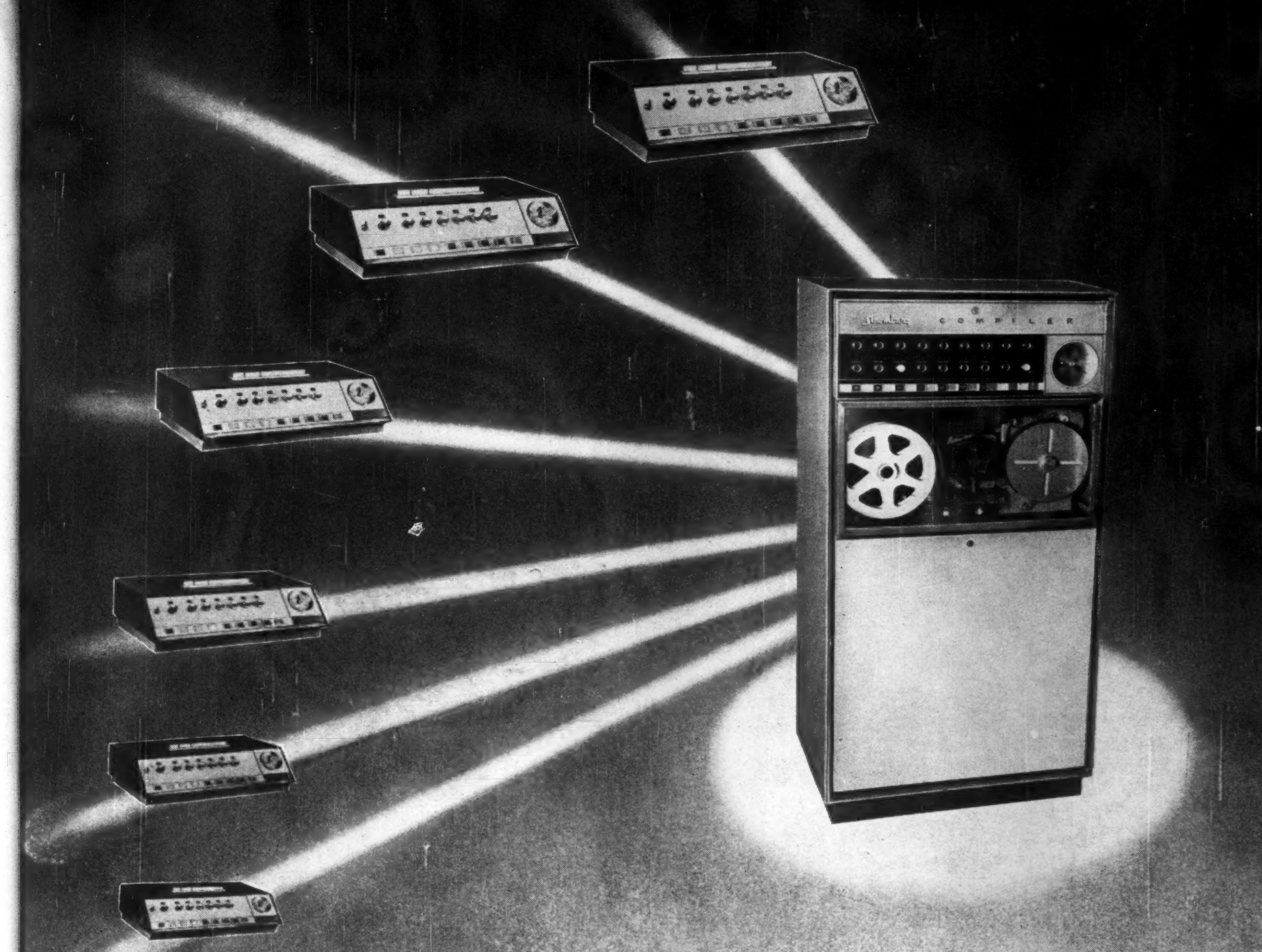
now available in Marvelous

Minnesota!

Site-see Minnesota from your desk! New 112-page fact book lists 123 Minnesota cities with latest industrial facts and available sites—plus name of local contact.

WRITE: On your firm's letterhead for free industrial site book, "Minnesota Welcomes New Industry"

Dept. of Business Development, State Capitol,
Dept. 457, St. Paul, 1, Minnesota



Now—from STROMBERG . . .
The TRANSACTER* System . . . A *NEW* MANAGEMENT TOOL

NEW ACCURACY

AND SPEED

IN INDUSTRIAL

DATA COLLECTION

The TRANSACTER System is an automatic input device, designed and engineered to provide any company with an incredibly accurate and rapid information link between many, widely scattered factory locations and a central data processing center. The unique advantages of the TRANSACTER System help to make possible a more profitable utilization of the capacities inherent in your existing or planned-for data processing center.

Here's new accuracy—thanks to completely built-in safeguards and controls against human error.

Here's new speed—from vastly superior message composition, pre-composed before entering the communications system. The TRANSACTER System rules out dependence on operator dexterity . . . eliminates queuing and system tie-ups.

And the Stromberg TRANSACTER System is *durable*—of compact, modular construction, quality engineered for heavy, continuing use in any production environment.

**Trademark of Stromberg Division, General Time Corporation*

For detailed information and recommendations, write, wire or phone Stromberg Division, General Time Corporation at Thomaston, Connecticut, or any of the 65 Stromberg Sales and Service Offices in the U.S.A.

STROMBERG
DIVISION OF GENERAL TIME CORPORATION
THOMASTON, CONNECTICUT

Latest style in Albany, New York

THIS IS A HARD HAT. It's worn by men who get things done. It's the perfect symbol for the new spirit in New York State . . . a spirit that's working to create more and better job opportunities for everyone by encouraging business to grow.

Focal point of this new spirit is the capital city of Albany. The city is alive with "doers." Successful business and professional men who gave up positions of responsibility to help Governor Nelson Rockefeller make New York State an even better area for companies to locate and grow . . . an even more rewarding place to live and work.

You'll see and feel the work of the hard-hat "doers" in many ways. In the interest in streamlining the administration of laws affecting business . . . in the new survey of New York's business climate . . . in the new study of taxation . . . in new approaches to plant financing and in many other new developments.

If you agree that your company could grow and prosper in this hard-hat businessman's climate, get in touch with the Commissioner of Commerce, Keith S. McHugh. He will send you, free, confidential, up-to-date reports on sites, labor, transportation, markets, raw materials, water. Write Keith S. McHugh, New York State Department of Commerce, Room 1531, 112 State Street, Albany, N. Y., or phone HObart 2-7511.

GET UP TO DATE ON NEW YORK STATE
where they're talking the businessman's language

of thousands in fees and capital expenditures in the bargain.

On the other hand, there are dangers in attempting to convert a building designed for another purpose. It may not be large enough to provide for future expansion. It may be poorly located. It may lack essential utilities. Deciding whether to abandon a company building or convert it to other functions is a real test of management acumen. —M.M.

[illegible] Employees with Better "Extras"

INDUSTRY'S PLANT

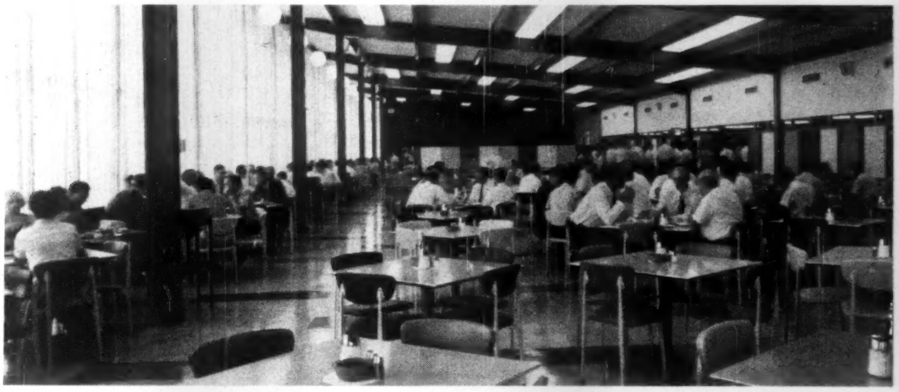
Management is finding it pays to give as much thought to the company cafeteria and other employee facilities as any other benefit designed to attract and hold good workers.

Managements are finding the company cafeteria doesn't come à la carte any more. The steady suburbanization of industry means that companies must include attractive eating places in their plans for new industrial buildings, for once a company moves out of the center of town, it can't depend on the corner luncheonette to feed its employees. The lunch pail, of course, has all but passed out of the picture.

When practically all company employees must eat one meal a day in the plant, management has to give more thought to food service. Here are some of the questions executives must answer in solving this multifaceted problem:

- Should the food service be in a cafeteria, by a vending machine, or a combination of both?
- Should it be subsidized—and if so, to what extent?
- Should lunch hours be staggered so that everyone doesn't line up at once?
- Should supervisors and hourly employees eat the same food in the same place?
- Should the cafeteria be flexibly designed to accommodate other company or community functions?
- Who should run the cafeteria?
- How can the menus and appearance of the cafeteria be improved to boost morale and to keep employees from getting bored?
- Will special foods be needed to accommodate employees' religious needs or national origins?

For most companies, these prob-



EATING IN STYLE: *The cafeteria at the new Union Carbide Chemicals technical center illustrates many of the new trends in company eating facilities: separate tables and chairs, cheerful color schemes, and good non-glare lighting. The cafeteria is in a separate building with its own parking lot (see diagram on page 85). Yet, the cost of the structure is not high. Notice that the steel columns and beams are unplastered.*

CANDY
PASTRIES
ICE CREAM
1903
15SL
COFFEE
COLD DF

VENDING MACHINES *can be grouped together in stylish fashion to serve large groups of employees. This is the new cafeteria at KW-Dart Truck Company, Kansas City, Mo. Murals over the bank of Vendo machines show how trucks are made.*

How to find a plant site in California

This is the office of F. B. Stratton, Director of our Industrial Development Department. It's a busy place these days, as more and more companies are meeting competition and reducing their costs by setting up branch plants and distribution centers in Northern California. Because Western Pacific has been so closely identified with this booming market for so many years, site-seekers come to Bert Stratton for his expert, first-hand reports on such vital matters as local tax structures, labor supply and living conditions, and for his suggestions on specific sites.

Here are just a few of the companies that have recently located on the lines of the Western Pacific System:

American Thread • International Paper
Armco Drainage & Metal Products, Inc.
Johns-Manville • Deere & Company
Pillsbury Mills • Safeway Stores
Inland Steel Products Company

But WP still has thousands of acres of highly desirable industrial property available in these areas:

San Francisco • Oakland • Concord
Hayward • Fremont • Livermore
Union City • Modesto • Turlock
Sacramento • San Jose • Milpitas
Stockton • Tracy

For confidential information, get in touch with F. B. Stratton, Western Pacific, 526 Mission St., San Francisco 5.

WESTERN PACIFIC
Information Center for
INDUSTRIAL PROPERTY

in Northern California

SPOT O' SUN: *Many company cafeterias, even in northern states, are adjoined by outdoor terraces where employees can enjoy the sun and fresh air while they eat. This group is relaxing at the new Philip Morris Research Center in Virginia.*

lems are resolved by building attractive cafeterias, complete with murals and music, and letting an outside organization operate it at a standard 5 per cent profit based on gross food volume. The supervisor appointed by the food service organization usually reports to the personnel director.

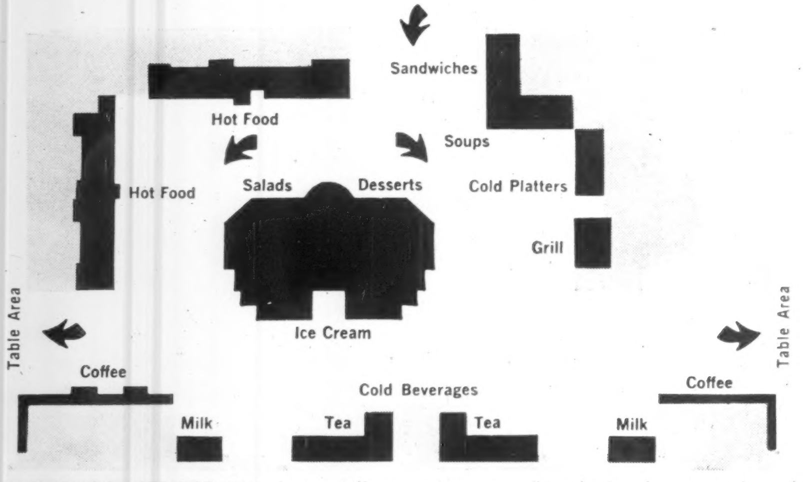
Companies that elect to run their own cafeterias find it is best to hire a man or woman especially to manage the cafeteria. It's too big a job in any but the smallest plants for the personnel director to handle in his spare time. Some companies that left the cafeteria in direct charge of the personnel director soon had to hire another executive—to handle personnel administration!

The emphasis on more attractive cafeterias is part of the big trend toward easy-to-live-in industrial buildings—a move that doesn't cost so much as people think, yet pays off in higher productivity, lower turnover, and better community relations.

With an eye to the future, many companies are specifying separate cafeteria buildings, set far enough away from key production or technical buildings so that vital expansion is not blocked (see photo on page 111).

Some companies have gone a step further and made the cafeteria the center of an employee recreation area. For instance, the cafeteria at the new Atlas Powder Company headquarters in Wilmington, Del., shares a building with a lounge and library. Picture windows overlook the employees' swimming pool and tennis courts. The building is connected to the other buildings by covered walks to protect employees during inclement weather.

continued on page 115



FASTER FOOD SERVICE: *This diagram illustrates a company cafeteria laid out in "shopping center" style for faster service with fewer cafeteria employees.*

TRIES
ICE CREAM
COFFEE
COLD DRINKS
HOT FOOD
MILK

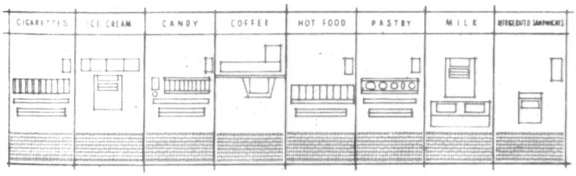
Why meal and break-time feeding is so simple with Vendo machines

Vendo machines automatically serve food and refreshment at the drop of a coin. These venders sell, serve, collect and even make change . . . and they operate around the clock! Today, in more and more plants and offices, Vendo machines are saving time and manpower—pleasing employees and employers alike with appetizing food and delicious beverages. You can offer hundreds of items—hot freshly brewed coffee, cold refreshing milk and ice cream, hot foods and soups, fresh fruit and juices, sandwiches, hot chocolate, candy, pastry, soft drinks and cigarettes. What's more, this equipment can be attractively grouped and unified to provide an inviting area with a cheerful atmosphere.

Your vending operator will be glad to tell you how Vendo machines will furnish automatic food and refreshment service for your place of business, or mail the coupon below to Vendo for complete details.

THE Vendo COMPANY

WORLD'S LARGEST MANUFACTURER OF AUTOMATIC MERCHANDISING EQUIPMENT



The Vendo Company
7400 East 12th Street
Kansas City 26, Missouri

DR-3

Please send information about VENDO equipment for automatic food and refreshment centers.

Name____________________

Title____________________

Company____________________

Address____________________

City__________ State__________

UNITED

To Put It Simply:

UNITED Food Management Services, Incorporated is an organization of experienced specialists who will design, equip, staff, operate and supervise your company cafeteria, executive dining room, carry-out canteen, vending battery, or mobile canteen.

It is uniquely equipped by 40 years of experience in business, industrial and institutional food service to help you attract and hold desirable employees, build their morale and health, and achieve optimum productivity. Moreover, it is oriented to management's point of view on budgets, operating controls and financial reports.

UNITED serves nearly half a million customers every day in more than 250 installations. It can also bring *you* the most economical, efficient and appetizing food service available.

For Immediate Information or Future Reference:

Please send me the UNITED "Food Service in Print" Series, including the UNITED "Clinic Questionnaire" to help me outline my own food service requirements.

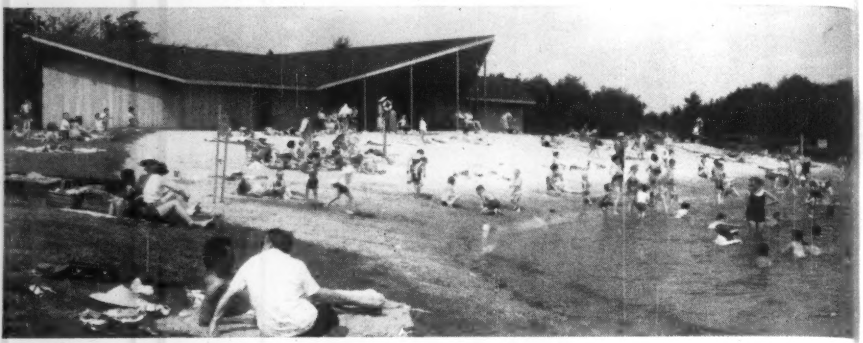
MY NAME________
TITLE________
COMPANY________
ADDRESS________
CITY______( ) STATE______

UNITED FOOD MANAGEMENT SERVICES, INC.
7016 Euclid Avenue
Cleveland 3, Ohio

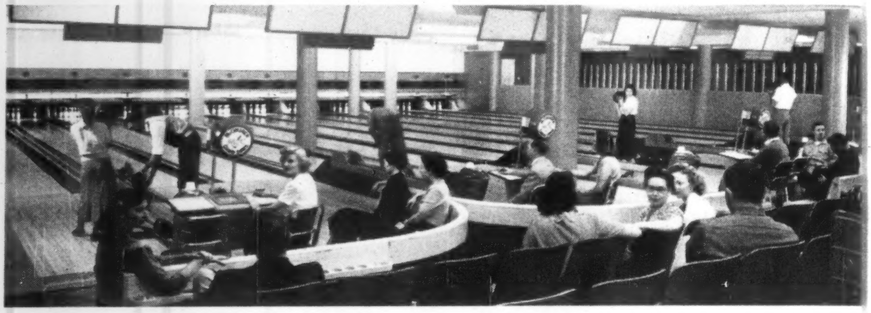
Call us collect if you're in a hurry — UTah 1-6622.

Food Alone Is Not Enough

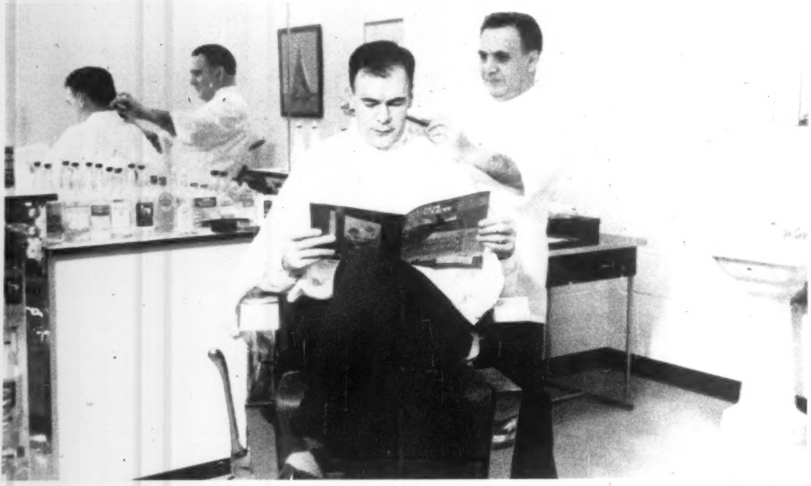
Many companies are now offering more than attractive eating facilities in their efforts to attract and hold employees and maintain morale. Here are some examples:



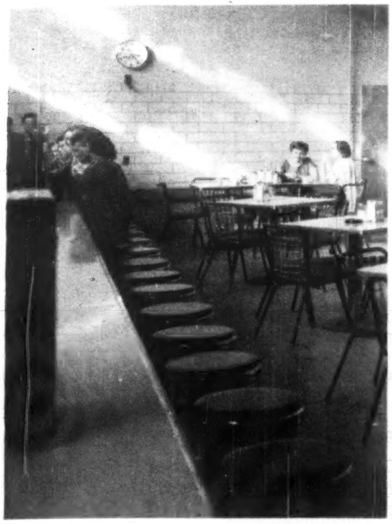
ON THE BEACH: *Heald Machine Company provides a seven-acre recreation area and bathing beach on Indian Lake in Worcester, Mass., for its employees and their families. Besides swimming and fishing facilities, the area includes outdoor fireplaces with firewood for family cook-outs. Vending machines provide soft drinks, milk, candy.*



STRIKES WELCOME: *This twelve-lane bowling alley is in the basement of the new $1 million employee recreation building constructed by McCulloch Corp., Los Angeles. The 90,000-square-foot building also includes a dining room, cafeteria, short-order counter, two smaller dining rooms for private parties, and a theater-auditorium.*



TRIMMING EMPLOYEES: *The Fuller Brush Company, Hartford, Conn., included a barber shop among the employee facilities in its new main office and plant.*



QUICK SERVICE: *This soda-fountain snack bar is for employees who want fast service at meals or during the coffee break. Designed by Ralph Stoetzel of Chicago, this cafeteria was installed at the new plant of The Sangamon Company, printers, Taylorsville, Ill., for the benefit of its 200 employees. The employees specifically requested that this feature be included.*

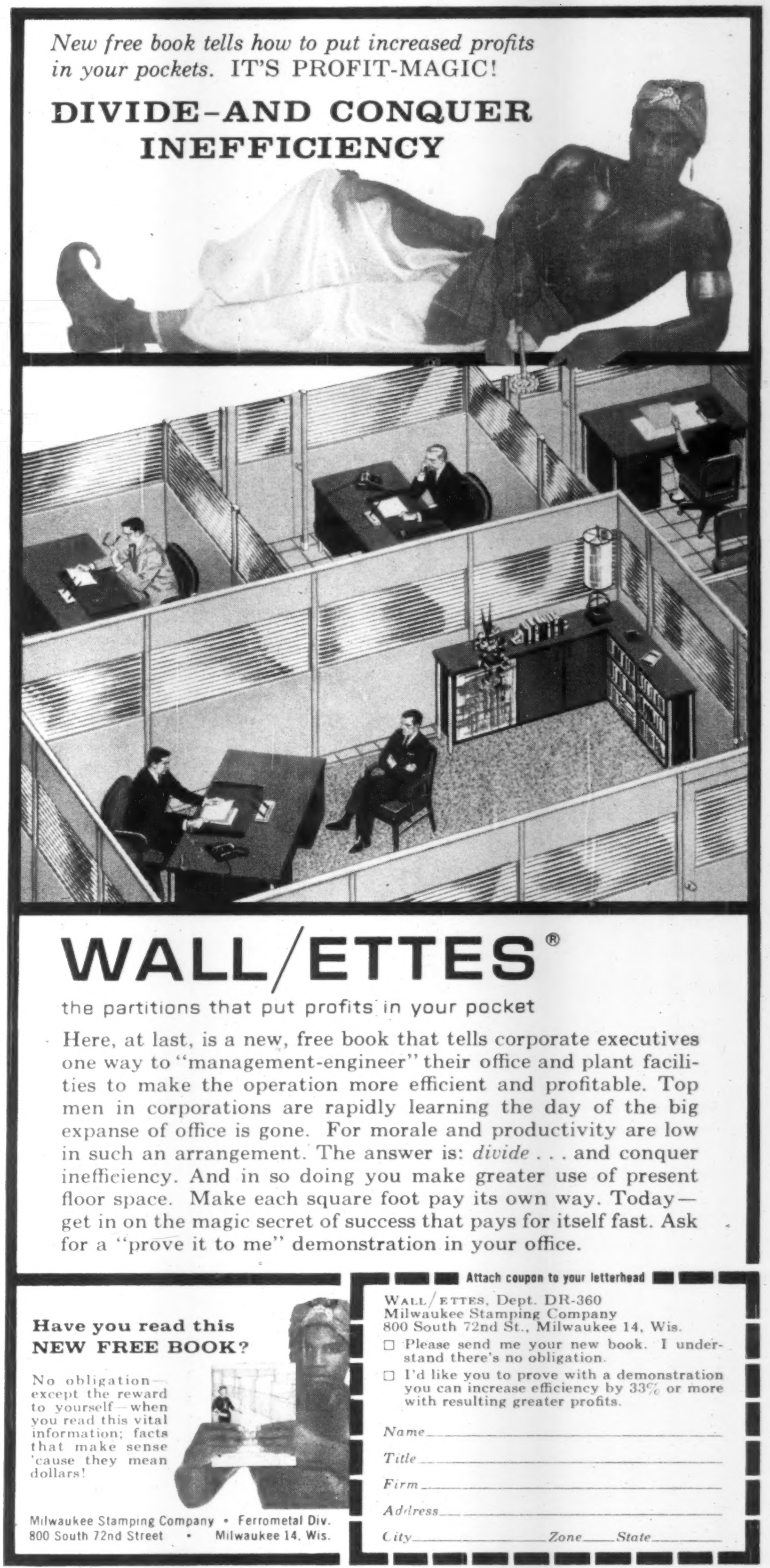
(continued from page 112)

Companies find there are many advantages to having the employee lounge next to the cafeteria. It means faster food service for all, because as soon as an employee finishes eating, he is tempted to get up and go next door for his card playing, gossiping, or catnapping in the lounge, leaving his cafeteria seat for another diner.

Some companies have designed their cafeterias so that they can be used for other functions such as meetings and employee socials. In an effort to establish themselves in a new community, companies have even offered the use of the company cafeteria to local organizations for nominal fees or even gratis. Sometimes, however, these generous moves can backfire if other organizations in the town, such as school or fire department, lose accustomed fees for renting their facilities.

The company cafeteria can become an important competitive element in attracting labor, especially when wages and other benefits are equal. In older plants, managements are trying to match this important new employee attraction by modernizing the cafeteria and improving service.

One simple way of modernizing is to replace the traditional long tables and benches with chairs and small



New free book tells how to put increased profits in your pockets. IT'S PROFIT-MAGIC!

DIVIDE–AND CONQUER INEFFICIENCY

WALL/ETTES®

the partitions that put profits in your pocket

Here, at last, is a new, free book that tells corporate executives one way to "management-engineer" their office and plant facilities to make the operation more efficient and profitable. Top men in corporations are rapidly learning the day of the big expanse of office is gone. For morale and productivity are low in such an arrangement. The answer is: *divide* . . . and conquer inefficiency. And in so doing you make greater use of present floor space. Make each square foot pay its own way. Today—get in on the magic secret of success that pays for itself fast. Ask for a "prove it to me" demonstration in your office.

Have you read this NEW FREE BOOK?

No obligation—except the reward to yourself—when you read this vital information; facts that make sense 'cause they mean dollars!

Milwaukee Stamping Company • Ferrometal Div.
800 South 72nd Street • Milwaukee 14, Wis.

Attach coupon to your letterhead

WALL/ETTES, Dept. DR-360
Milwaukee Stamping Company
800 South 72nd St., Milwaukee 14, Wis.

☐ Please send me your new book. I understand there's no obligation.

☐ I'd like you to prove with a demonstration you can increase efficiency by 33% or more with resulting greater profits.

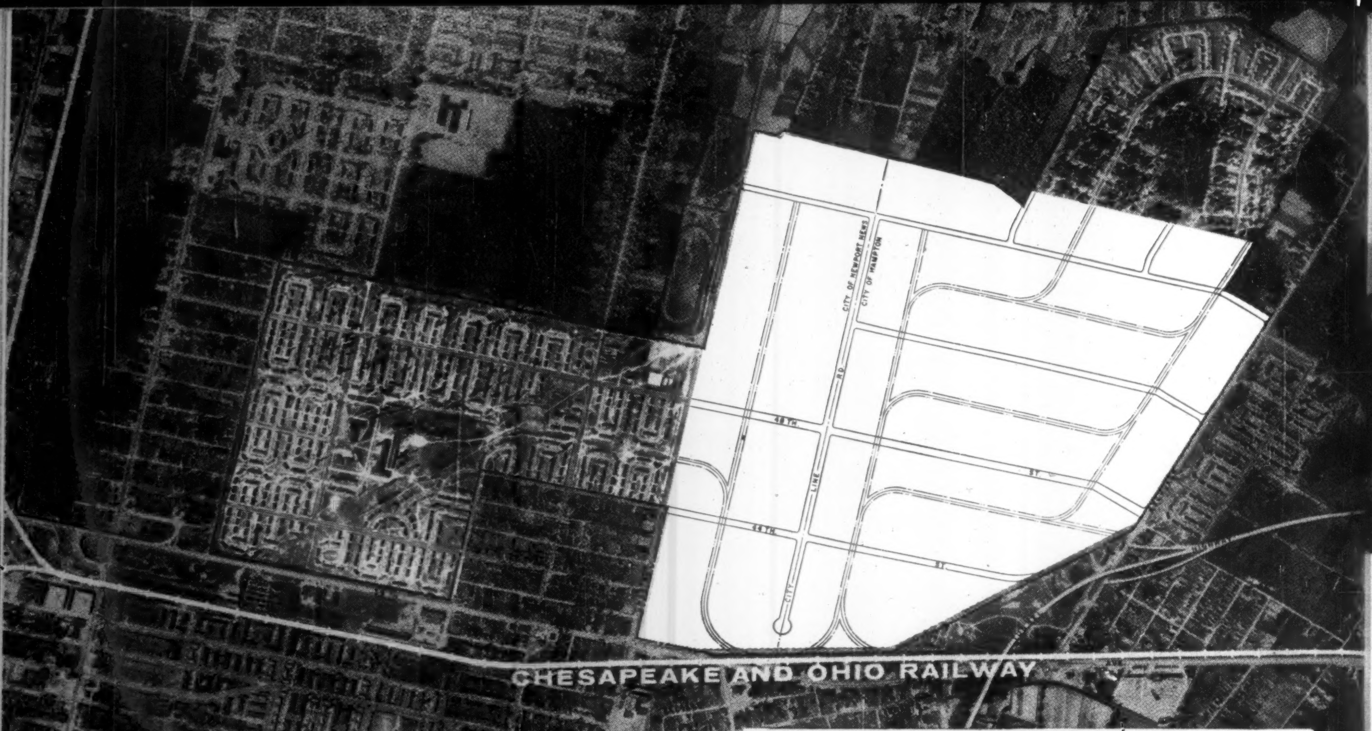
Name __________

Title __________

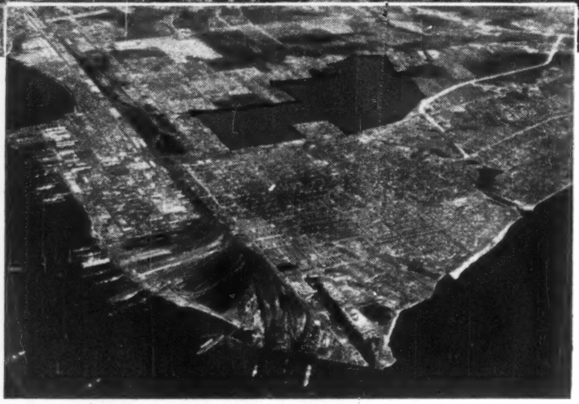
Firm __________

Address __________

City ______ *Zone* ____ *State* ______



Area in white is cleared and ready for building. Other areas will be cleared of present residential construction as needed.



Copeland Industrial Park (blue) adjoins Newport News business section and is close to the great pier facilities serving world-wide commerce.

Start building tomorrow at

Copeland Industrial Park

in Newport News—Hampton, Virginia

There are lots of Industrial Parks on paper – here's one that is already developed, offering important advantages not usually available at the start. Sites are already graded and all utilities – water mains, gas, electricity – are in existence. These factors help reduce construction costs, shorten building time and make it unnecessary to conduct separate negotiations for each utility installation.

Excellent transportation by land and by sea. Nearby markets easily reached by Chesapeake and Ohio Railway or highway. Its location at Hampton Roads – one of America's busiest harbors – links it most conveniently to all parts of the world.

There is an ample supply of both skilled and unskilled labor. The two adjoining cities of Newport News and Hampton have a combined population of 207,774. The area has a long tradition of good labor relations.

We will be glad to send you full information about the many advantages that make this a most attractive location for a great variety of industries.

Address: Wayne C. Fletcher, Director of Industrial Development, Chesapeake and Ohio Railway, Huntington, West Virginia – Telephone: JAckson 3-8573.

Chesapeake and Ohio Railway

SERVING: Virginia • West Virginia • Kentucky • Ohio
Indiana • Michigan • Southern Ontario

ZERWICK
ROBERTS
BUCKLEY
SMIT

Zerwick (*left*) *". . . the use of color, lighting, and even holiday decorations in employee restaurants can put more interest and enthusiasm into a benefit that hits the employee in the stomach every day."*

tables. However, this takes up more room, and most of the older cafeterias are already cramped.

A redesign based on the new "shopping center" technique (see diagram) may solve the problem of limited elbow room. Instead of one or two long food lines, food is served from a series of circular or near-circular kiosks. If a secretary wants only a salad, she can go directly to the salad center instead of slowly and irritatingly working her way through the line. And the shopping center cafeteria requires fewer service employees for the same volume of "customers."

Older cafeterias are also being made more attractive by frequent repainting in brighter colors and by more elaborate menus featuring "gourmet"

Can You Top This?

Here are some examples of gourmet foods regularly served in company cafeterias.

Rock cornish hen
South African lobster tails
Chicken curry with chutney
Vichysoisse
Oysters on the half-shell
Spanish melon
Mountain trout au meunière
Deviled eggs with caviar

Can your company cafeteria still afford to serve meat loaf and mashed potatoes?

Underwriters' Laboratories, Inc.
INSPECTED
TYPE EX
REVOLVATOR
EXPLOSION PROOF
CLASS 1 GROUP D
POWERED
FORK TRUCKS
REVOLVATOR

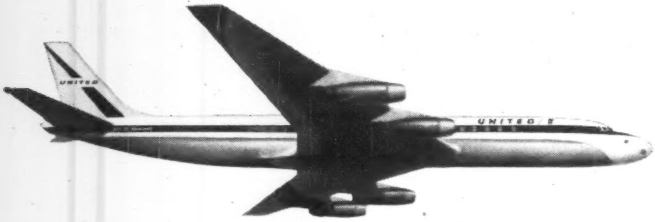
GO-GETTER CUTS COSTS IN HALF; MAKES JOB SAFER

A leading chemical plant faced with the double explosion hazard of ethylbenzene fumes and aluminum chloride dust, solved its material handling problems – and saved money in the process – through the use of Revolvator's new fork lift trucks labeled Type Ex by Underwriters' Laboratories for Class 1 Group D explosion hazardous areas.

Previously, two men with a hand truck were required for this operation. Since the introduction of the Explosion Proof Go-Getter, one operator easily charges the hoppers in a safe manner with a minimum effort. "What used to be a dangerous, disagreeable job has now become a simple task," says the plant manager.

The explosion proof Go-Getter, available in 12 standard models, is but the latest development in Revolvator's better than a half century of experience in materials handling equipment covering standard walkie lift trucks, hand lift trucks, portable elevators and related equipment.

REVOLVATOR CO.
8702 TONNELE AVENUE, NORTH BERGEN, N. J.
SINCE 1904



EXCLUSIVE ON UNITED AIR LINES

RAF/JET FREIGHT

Reserved Air Freight. RAF®/Jet Freight lets you reserve space aboard a United Air Lines DC-8 Jet Mainliner® and assures you that all shipments get where you want them, on time. Just call United and definite space will be reserved for your shipment, on either a one-time or a recurring basis.

Expanding service. RAF/Jet Freight is now available to or from **New York, Washington-Baltimore, Philadelphia, Chicago, Denver, Los Angeles, San Francisco, Seattle-Tacoma, and Portland, Ore.**

More speed, capacity on non-jets. DC-7 Cargoliners are being added to United's fleet. The greater capacity and speed of these Cargoliners, coupled with jets, give you more opportunity to use cost-cutting Air Freight for *regular* distribution. RAF—*Reserved* Air Freight—available on *all* flights.

Learn how growing RAF/Jet Freight Service can help you. Call any United Sales Office or write to United Air Lines, Cargo Sales Division, 36 S. Wabash Ave., Chicago 3, Ill.

Fly United and ship United
for extra care on the best of the jets

UNITED AIR LINES ® DC-8
JET MAINLINER, BY DOUGLAS

foods. (See the box on page 117 for examples of the fancy foods served in many company cafeterias.)

Some companies without cafeterias or room to build them are installing food vending machines at strategic spots throughout the plant. Frequently, food vending machines are nested together in a small, attractive room with a few tables and chairs.

There's no question that vending machines can handle large numbers of employees. For instance, at the American Motors Corp. plant in Kenosha, Wis., 8,000 employees are fed by vending machines—ten banks of them. There are no company cafeterias in the building.

Some companies with subsidized cafeterias have converted them to vending-machine areas. Profits are then put into an employee fund.

Although most companies provide handsome separate eating facilities for supervisors, the Campbell Soup Company in Camden, N.J., made its executive dining room less attractive than the workers' cafeteria. Management didn't want the clerical employees to downgrade their own facilities by comparison. Many companies, however, are combining executive and hourly employees' eating facilities—to boost morale.

Some companies are so far out in the sticks that they have actually installed bars for the benefit of employees. Of course, they are only open after 5 P.M. or at the end of the shift for special events and parties.

In the battle to attract and retain high-grade employees, the company cafeteria is becoming another valuable pawn.

—M. M.

Preview of Tomorrow's Plants

INDUSTRY'S PLANT

How will the plants of 1970 differ from today's? Here are the trends management should watch.

Like millions of other city dwellers, industry during the past decade joined the mass migration to the suburbs and beyond, taking on a new look in the process.

No longer a dirty denizen of a grimy "factory district," the typical suburban plant (particularly in light manufacturing or research) became a highly desirable catch for many communities troubled with soaring taxes. To fit into this new environment and to attract desirable employees from it, industry found it needed plants that would be new in both setting and shape—so new, in fact, that in many communities plants now look like hospitals and research labs look like schools.

What can we look for in the design of plants during the 1960's? What new construction methods and materials will help create the plants that industry will be putting down in 1970?

To find answers to these and other questions, DUN'S REVIEW asked architects and engineers across the nation to let us have a peek at the plans on their drawing boards for the plant of 1970. Here's a sampling of their thinking on the shape of plants to come:

. . . The plant as a machine

WELTON BECKET, *president, Welton Becket and Associates, architects and engineers, Los Angeles and New York*

Industrial plant design during the coming decade will be influenced by three major factors:

- Greater emphasis on planning for integration of function
- Improved working environment
- And greater speed and flexibility of construction.

One result of these considerations will be a pronounced trend to the

ARE YOU MEETING COMPETITION IN THE WEST?

Industrial Sites
MOA
ALAMEDA COUNTY CALIFORNIA
METROPOLITAN OAKLAND CALIFORNIA AREA
"THE HEART OF CALIFORNIA'S INDUSTRIAL AREA"

FREE!
Send for your copy now!

Let this factual Metropolitan Oakland Area booklet, showing available industrial sites, help you select the area from which you can best meet competition in the great and growing market of the West—over 25,000,000 prosperous people now, adding 750,000 every year. California alone now has over 15,000,000 residents, is growing at a rate of almost 600,000 a year.

Have your secretary clip this advertisement to your letterhead, type name of individual to be addressed and your copy will be sent you at once. ALL INQUIRIES STRICTLY CONFIDENTIAL.

METROPOLITAN OAKLAND CALIFORNIA AREA

Suite 2500
1320 Webster St.
Oakland 12
California

ALAMEDA • ALBANY • BERKELEY
EMERYVILLE • FREMONT • HAYWARD
LIVERMORE • NEWARK • OAKLAND
PIEDMONT • PLEASANTON • SAN LEANDRO
UNION CITY • RURAL ALAMEDA COUNTY

Send *Today* for this New Data on *Upward-Acting* Doors for Every Need

interlocking slat curt
Kinnear slats—steel (zinc-coated*) aluminum and other metals
REGISTERED
KINNEAR ROLLING DOORS STEEL or ALUMINUM
Rolling Service Doors
Motor Operation
Steel Rolling Fire Doors
Metal Rolling Grilles
Counter Shutters
Steel & Wood Rol. Top Doors

Kinnear originated the interlocking slat door

Get full details on this complete line of time-saving, cost-slashing doors. They add highest efficiency to space-saving, coiling upward action. Kinnear offers a wide choice of flat and curved slats—fabricated of aluminum, zinc-coated steel, or other metals. They fit every need, from small counter openings to largest doorways. Slat sizes range up to the seven-inch "Goliath" slat at the extreme left, above — maximum protection against wind, weather, intrusion or vandalism!

Zinc-Coated *Dual* Protection
Kinnear Steel Rolling Doors feature extra-heavy hot dip galvanizing! 1¼-ounces of pure zinc per square foot of metal (in accordance with ASTM standards). And Kinnear's special phosphate treatment makes this zinc surface ready *immediately* for thorough paint grip.

Make sure you get this complete door guide — check it *now!*

KINNEAR ROLLING DOORS
Saving Ways in Doorways

The KINNEAR Mfg. Co.
FACTORIES:
1500-20 Fields Ave., Columbus 16, Ohio
1742 Yosemite Ave., San Francisco 24, Calif.
Offices and Agents in All Principal Cities

open, campus-type plant, in which each function is grouped in its own building or building complex. The individual buildings are then arranged for maximum integration of all functions. Just as industry once laid out machines in this manner, following the plans of industrial engineers, modern industry will lay out the entire plant complex.

New management theories about the number of people and amount of production which can be properly administered under each echelon are giving impetus to the trend toward campus-type facilities. Many companies are trying to get top-to-bottom control, with the head executive in complete charge of his entire operation. The campus-type break-up into separate buildings is an aid to this type of management.

The coming decade will see continued movement to industrial parks, a fact which will do much to increase efficiency as well as to upgrade both the plant environment and the neighboring community.

Industrial building design aimed at providing optimum environmental conditions for workers is leading architects in two directly opposite directions. Interestingly enough, both directions lead to lower building costs. One tendency is to use *all glass*, while the other is to use *no glass*. Both have definite advantages.

An all-glass industrial structure (which can only be used in specialized cases) permits maximum use of sunlight and provides an attractive environment. At the same time, all-glass construction reduces the weight of a building, thereby permitting use of a lighter-weight and less expensive frame.

A building with no glass, on the other hand, permits a completely controlled atmosphere through the latest developments in artificial lighting and air conditioning. At the same time, it does away with the cost of installing and covering windows. Many executives feel, also, that a structure without windows results in greater worker efficiency since there is no distraction by activities in the area outside the building.

Reinforced concrete structures,

When management makes the **BIG** decision...

in building products-it's Mahon

Here's why. Many of you running industry are faced with major decisions involving new building construction, plant modernization, or expansion. You . . . your architects and engineers . . . are vitally interested in better ways to cut component costs, speed construction and still provide clean-line attractiveness, functional to your particular requirements. Mahon Building Products are designed to fill these needs . . . providing efficient, economical construction . . . easy installation and inexpensive maintenance. Investigate the management advantages of these Metal Walls and other Mahon Building Products. Then you'll be properly informed.

THE R. C. MAHON COMPANY / *DETROIT 34, MICHIGAN*

Manufacturing Plants—Detroit, Mich. and Los Angeles, Calif.
Sales-engineering offices—Detroit, New York, Chicago, Los Angeles and San Francisco
Representatives in all principal cities

MAHON COMPANY

BUILDING PRODUCTS

- Aluminum or Steel Curtain Wall (in bright metal or colors)
- Rolling Steel Doors (Standard or Underwriters' labeled)
- Metalclad Fire Walls (Underwriters' rated)
- M-Floors (Steel Cellular Sub-Floors)
- Long Span M-Deck (Cellular or Open Beam)
- Steel Roof Deck
- Acoustical and Troffer Forms
- Acoustical Metal Walls and Partitions
- Permanent Concrete Floor Forms

CONSTRUCTION SERVICES

- Structural Steel—Fabrication and Erection
- Steel Fabrication—Weldments

Write for descriptive literature. Also in Sweet's Files.

MAHON

CASE IN POINT: The bright new plant of Screw and Bolt Corporation of America at Mt. Pleasant, Pa. Engineered and built by The Austin Company, Mahon Aluminum Curtain Walls are used throughout.

Construction risks require professional insurance counsel

The time to insure construction projects is before the first shovel of earth is turned—before you give the go-ahead on your building program. This is attested by the experience of owners, builders, contractors, architects and engineers.

Professional insurance counsel is required. Informed analysis of construction risks, drafting of contract specifications regarding insurance, arrangement of proper coverages including bid and performance bonds—these important services can be as technically demanding as the securing of property title by your legal advisors or financing by your bankers.

Marsh & McLennan's qualifications in this field are evidenced by our arrangement of insurance for much of today's major construction across the country. Our services include not only the design, purchase and administration of coverages but loss adjusting, also fire and accident prevention and rate engineering that assures the lowest possible insurance costs. We invite your inquiry.

MARSH & McLENNAN
INCORPORATED
Insurance Brokers
CONSULTING ACTUARIES • AVERAGE ADJUSTERS

Chicago New York San Francisco Minneapolis Detroit Los Angeles Boston
Pittsburgh Seattle St. Louis Indianapolis St. Paul Portland Buffalo Duluth
Atlanta New Orleans Tulsa Milwaukee Phoenix Cleveland Norfolk Charleston
Oakland Montreal Toronto Vancouver Calgary Havana Caracas London

which require less steel, will be popular. Creative architecture has made possible concrete design with vaulted roofs and unusual and attractive shapes.

Prefabricated concrete parts may be used increasingly in future industrial plant construction. Whole building sections including door and window frames, may be prefabricated and shipped to the building site for rapid assembly. Pouring of standard elements could greatly lower cost.

Regardless of which form is used, architectural research during the next decade will make it possible to design plants with a maximum of integration, improved environment, faster construction, and greater flexibility, thus providing a better investment potential for industry.

. . . Tomorrow's plants today

A. T. WAIDELICH, *vice president for engineering and research, The Austin Company, engineers and builders, Cleveland*

In predicting the characteristics of the factory of the future, one would naturally like to make some startling forecasts—to paint a Buck Rogers-like concept of an exotic, fantastic structure. Undoubtedly some ultra-modern factories will be built, but the typical, efficient, modern industrial plant built ten or twenty years hence will not look too different from the more successful plants of today.

The prime function of a manufacturing plant is to produce products of a predetermined quality at the lowest possible cost. In general, this will be achieved in a single-story factory of rectangular floor-plan with a flat roof and few windows.

We may expect more and better use of color. Many new materials and ingenious assemblies will go into the walls, windows, and roof. But to the layman driving by the plant, it will not look very different from today's better plants.

It is reasonably safe to predict that the factory of the future will cost more than its present-day counterpart—even in terms of today's dollars—because more will be demanded of it.

. . . New building materials

RALPH STOETZEL, *Architects-Engineers, Chicago*

The factory of the 1970's will be

designed to emphasize and complement the function of the manufacturing operation, but the site will be much more open than those in many of the industrial developments we have today. Many more plants will be located in well-landscaped, park-like settings. All parts of the buildings will be air conditioned. The number of fully automated plants will increase.

Our increasing population is bringing industrial areas and residential areas closer together. Architects, realtors, and industrialists ten years from now will be giving more consideration to designing and locating plants so that industrial, commercial, and residential buildings will be integrated and harmonious in appearance. Steps will be taken in the design and planning stages to make areas of different land use complement each other.

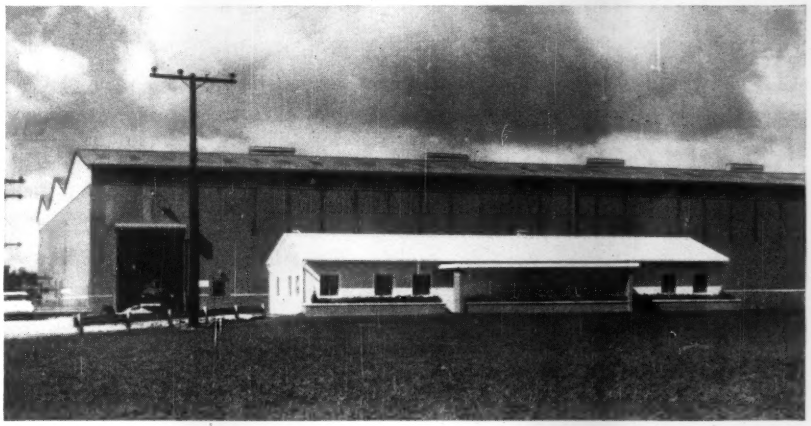
Each year in the next decade will bring new building materials, especially plastics, ceramics, and porcelain. These new materials will give the industrial architect more to choose from in color and texture for both interior and exterior finishes. The factories of the future will undoubtedly make more effective use of color.

The most important trend in construction techniques is the use of prefabricated labor-saving materials. Today, entire wall panels of conventional brick and mortar are available in a prefabricated form. Curtain wall panels that enable a contractor to enclose a building, once the frame is up, at the rate of two and three stories a day are another example of this trend.

Looking ahead, roofing and flashing of plastic that can be sprayed on will be an integral part of the factory of the future. Radiant infrared and solar heating and heat-pump air conditioning, openings protected by curtains of moving air, and simplified column and roof construction are other examples of construction features that will become commonplace.

A time-and-money-saving idea that will get increasing use in the next ten years is an inflatable-deflatable building for seasonal and temporary

ARMCO STEEL BUILDINGS...



A Better Way to Build for ANY Business Need

Factory? Office? Warehouse? Store? Garage? You name it—and there's an Armco Building that will meet your needs quickly, at less cost.

The key to these trim, durable buildings is the exclusive STEELOX® Panel Wall. This panel is engineered to interlock, forming a smooth outside wall with a rigid interior rib between panels. Interiors are easily insulated and finished. Attractive outside walls blend with other building materials—wood, brick, glass.

Panel construction saves time and materials. Just as important, it permits wide freedom of window and door location and size. You get just what you need.

If you are interested in a building that will last a long, long time *after* it has paid its way, just send the coupon for the factual story. There's an Armco Sales Office or Authorized Armco Building Dealer near you, ready to provide a *complete* building service. Financing is available, too.

New steels are born at Armco

Armco Drainage & Metal Products, Inc.
5850 Curtis Street, Middletown, Ohio

Send details on Armco Steel Buildings for the following uses:

Approximate size

NAME

ADDRESS

CITY ZONE STATE

ARMCO DRAINAGE & METAL PRODUCTS

ARMCO ®

Subsidiary of ARMCO STEEL CORPORATION
OTHER SUBSIDIARIES AND DIVISIONS: Armco Division • Sheffield Division
The National Supply Company • The Armco International Corporation
Union Wire Rope Corporation

Mr. Manufacturer:

Expand your distribution facilities with no capital outlay

No real estate investments, no payroll, no maintenance with AWA's *instant* warehousing service. No lease commitments, either. For flexibility and economy, public warehousing is the profitable answer. Investigate the AWA Pay-as-you-use Plan.

Write for Free Directory listing locations and space availabilities to fit your needs

AWA 512 Members Offering 1,273 Distribution Centers, Merchandise Warehouses & General Storage Facilities

American Warehousemen's Association

222 W. Adams St. • Chicago 6 • Randolph 6-5550

HOW ARE THINGS

MOVING

IN YOUR PLANT?

■ ■ ■ For horizontal movement of materials, equipment and personnel, a Prime-Mover transporter speeds it up. Two sizes: F-10—1000 lb. and F-40—4000 lb. capacity. Torque converter drive on Model F-40. You can reduce fixed costs with Prime-Mover transportation. Write for specific data on your requirements. Prime-Mover Co., Muscatine, Iowa.

PRIME-MOVER

storage. Plants are already being designed with extra paved areas on the site for this purpose, and some are even preparing the roof to handle temporary storage in inflatables.

. . . Emphasis on the esthetic

R. W. Olmstead, *president, H. K. Ferguson Company, engineers and builders, Cleveland*

In planning the factory of the future, designers will place a greater emphasis on the esthetic and the physical environment of the plant. Both management and employees are demanding more pleasant surroundings, and designers will have to meet these demands. Plants and related structures will have a campus-like atmosphere with extensive areas for physical recreation.

Changes in design will be brought about through the use of new materials and construction techniques. Of significance will be the change in the shape of the roof enclosing an area. Greater use will be made of space-framing structures and prefabricated units. Buildings will take on a new openness, enclosures being used only where required by the functional use of buildings or climatic conditions.

As the use of more automated equipment increases, significant changes in the design of plants will result. During the past decade, glass has been used, but the increased use of automated equipment should reverse this trend. There will be little need for glass and windows in automated, unpopulated areas of plants. However, in offices and research centers and other populated areas of plants plenty of glass will still be used.

All these changes will be the result of new technological developments in the plants. As the technology of solar, atomic, and microwave power transmission develops, it is possible some companies will produce their own power within the plant. Radical architectural shapes would be needed to enclose huge areas containing the plant and its power source, but this, of course,

SPACE

3000 sq. miles in the Gobi Desert is foolishness . . .

3000 sq. miles in metropolitan New York or Chicago is impossible . . .

but. . .

3000 sq. miles just across the river from downtown Philadelphia and overnight to the world's richest market spells P-R-O-F-I-T for your new plant.

Space for now . . . Space to grow! Broad acres, undeveloped.. Flat, well-drained land for low-cost building. Parking space "thrown in." Small, friendly home communities. That's the kind of money-making space waiting for your plant in

SOUTHERN NEW JERSEY

FILL IN THIS COUPON, clip to your business letterhead and MAIL IT TODAY to get latest SITE-MAP giving 245 available sites (up to 16,000 acres) now available in Southern New Jersey. Some with deep river frontage! No charge, no obligation . . . completely confidential.

SOUTHERN NEW JERSEY DEVELOPMENT COUNCIL

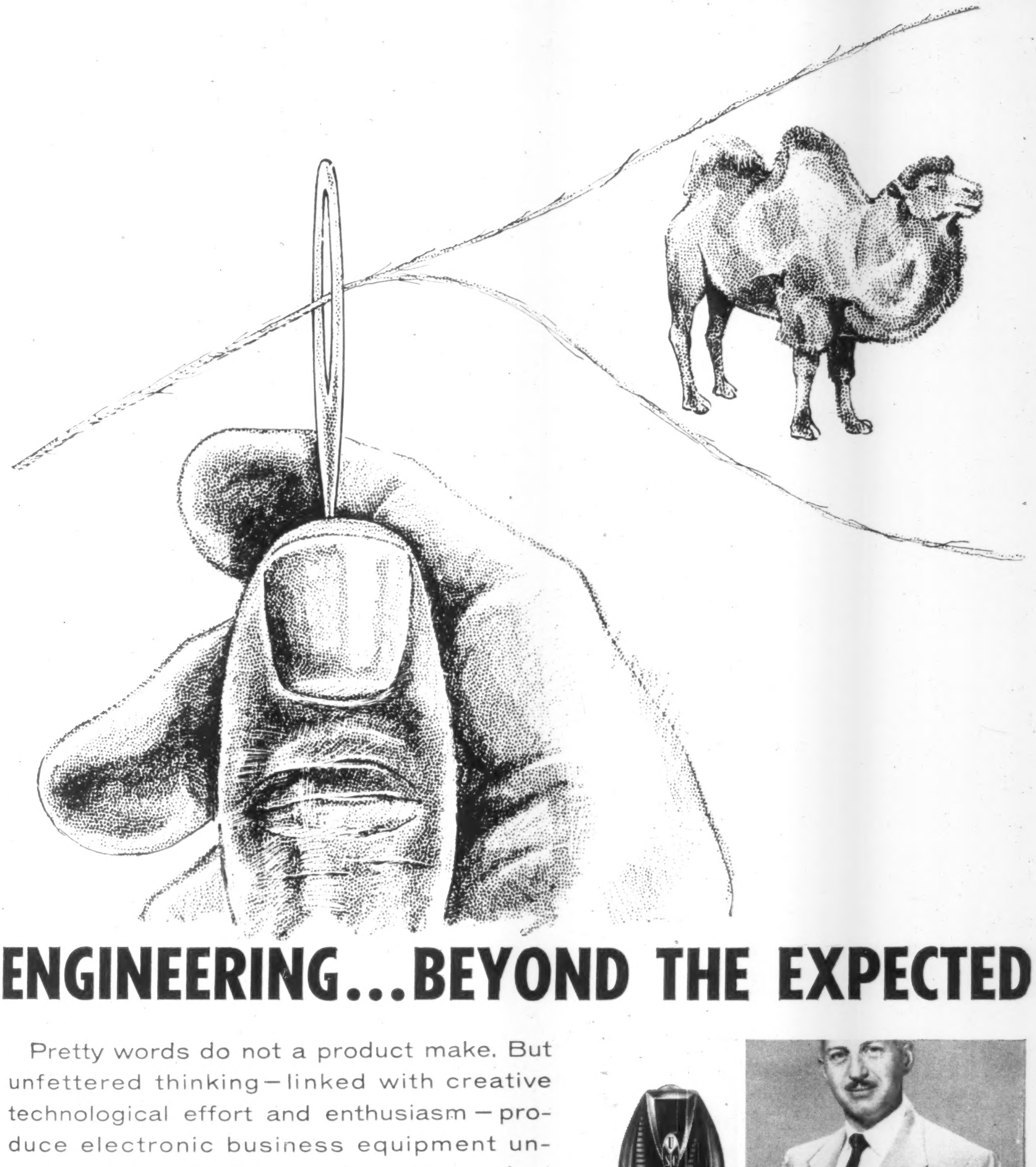
99 Boardwalk Arcade Bldg.
Phone Atlantic City 4-3338
G. Raymond Wood, Director

☐ Yes, we are looking ahead and we want space for our new plant or other facility.
☐ Send latest site-map.
☐ Send list of buildings available.

Name________________

Company________________

Address________________



ENGINEERING...BEYOND THE EXPECTED

Pretty words do not a product make. But unfettered thinking—linked with creative technological effort and enthusiasm—produce electronic business equipment unmatched for efficiency and economy—just what you need for your office, plant or institution. Look right, please, and read—then write us for detailed literature.

United States Communications, inc.
HICKSVILLE, L.I., N.Y.

EXAMPLE: The new "Electropage"® System offers startling new wireless voice paging — selective and non-selective. You speak instantly to anyone in buildings or grounds. No wires, bells, buzzers or lights. Each person "wears" a pocket-size "walkie-talkie." Tiny — but powerful. Foolproof. Low cost. Inquire **today.**

SEE a demonstration by a specialist

NEW ECONOMY
UP TO 50% MORE WASHINGS

NEW! non-depleting LAN-O-KLEEN® PLUS Hand Cleaner

for FREE demonstration or literature address:
WEST CHEMICAL PRODUCTS INC., 42-16 West St., Long Island City 1, N. Y.
Branches in principal cities • IN CANADA: 5621-23 Casgrain Ave., Montreal

WEST CHEMICAL PRODUCTS INC

COSTS DROP WITH "LIFT-UP" CONSTRUCTION

Mahony-Troast "Lift-Up" construction (like "Tilt-Up") saves time and money with concrete wall panels poured on the site. Steel-reinforced sections are lifted into position to form an attractive weatherproof wall requiring minimum maintenance inside and out.

SEND TODAY for free brochure, and compare "Lift-Up" construction with conventional techniques.

Mahony-Troast
CONSTRUCTION COMPANY
Clifton, N. J./Camden, N. J.
Est. 1928

EXECUTIVES...
"site-see"
INDUSTRIAL COLORADO
...right at your desk!

- Discover how your company can profit positively in Colorado.
- Learn why Colorado has become "the State that more than meets your site requirements.
- Examine the documented facts on Colorado's great wealth of **Manpower, Materials, Markets.**
- See why **Pleasant Living,** a product of Colorado's magic climate, is such a valuable bonus to industry.

This revised-to-the-minute 9-booklet portfolio, "Industrial Colorado," presents an informative, concise analysis of the opportunities awaiting new and expanding industry in Colorado.

WRITE FOR YOUR COPY TODAY!

COLORADO
DEPARTMENT OF DEVELOPMENT
53 STATE CAPITOL BLDG., DENVER 2, COLO.
Your inquiry will be held in strictest confidence.

would be rare. . . . Blending with the landscape.

Blending with the landscape

FRANK L. WHITNEY, *vice president of engineering, Walter Kidde Constructors, Inc., New York*

The appearance of the industrial plant of the future will be influenced by four major factors. (1) production economics which will dictate the plant size and shape, (2) the growing problem of parking employees' cars, (3) the increased emphasis on community relations which will add refinements which have not been evident in the industrial plants in the past, (4) the changing function of windows.

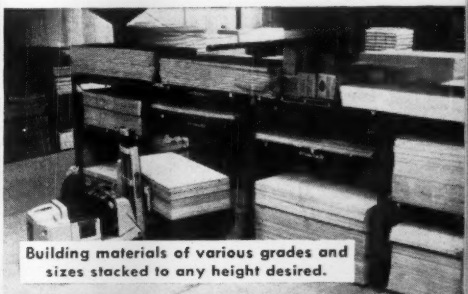
The geometry of the plant will be determined more and more by the manufacturing process and, as processes change, it will take advantage of automation. The structure will be recognized primarily as a protective shell over a production line. It is vital today that the structure be flexible and expandable, and rapid developments in automation and materials handling will demand even greater flexibility in production processes in the future.

The rapidly increasing cost of real estate, especially in choice suburban areas, is already causing industry to question the economics of tieing up large portions of the plant site for parking lots. Parking areas are often nearly double the area of plant structure, and industry is already looking for ways to release this valuable, expensive space for expansion. We have made some preliminary investigations of the economics of parking on the plant roof and basement and even multiple-story parking garages on the site. The study indicates that such buildings are cheaper than building and operating a plant addition in a new location.

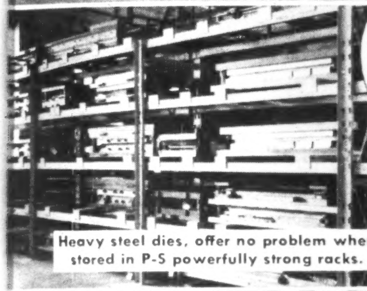
Community relations will dictate greater attention to plant styling, employee services, climate control, housekeeping, and employee recreation areas. Industry now realizes that an attractive plant is not only an effective attraction for new employees

How Much Money Can You Save In Your Storage Area?

Diesel oil and gas engine miscellaneous parts efficiently stored in P-S racks.


Building materials of various grades and sizes stacked to any height desired.

Sheet Steel neatly tiered in multiple sections.


Heavy steel dies, offer no problem when stored in P-S powerfully strong racks.

CONSULT DEPENDABLE P-S FOR THE BEST MATERIALS HANDLING EQUIPMENT

POWERFULLY STRONG

Adjustable

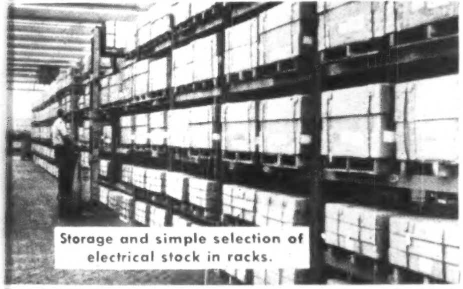
STORAGE RACKS

Simple and Easy to Assemble

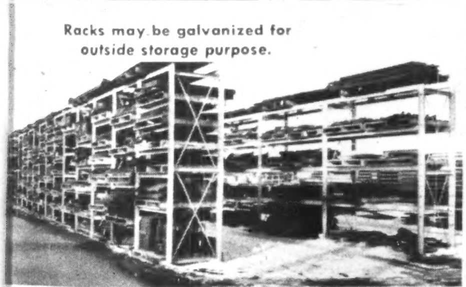
- NO BOLTING
- NO WELDING
- NO SMALL PARTS

Designed and built for any type of storage space requirements, to save you time and money by eliminating multiple handling operations. Can be used anywhere, in any size area, in single, double or multiple sections, to store materials of various sizes, shapes and weights. Also can be galvanized for outside use. For rigid, non-sway support, adjustable members lock by hand into double slots set at angle on uprights at level desired. For a solution of your materials handling problem always consult Palmer-Shile.

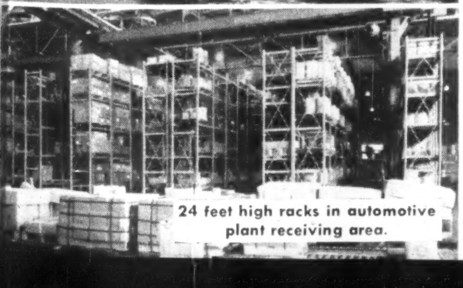
Note rack shelf is adjustable to any level for miscellaneous stock needs.


Storage and simple selection of electrical stock in racks.

Use all your inner space with racks made for economical use of floor to ceiling space.


Racks may be galvanized for outside storage purpose.

Aluminum and copper being handled in racks adjustable to various height openings.


24 feet high racks in automotive plant receiving area.

DESIGNED AND MANUFACTURED BY

Palmer-Shile Co.

16034 FULLERTON AVE., DETROIT 27, MICH.

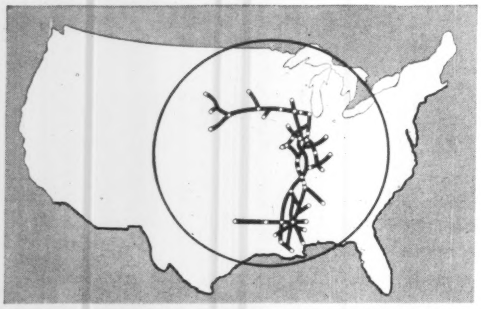
Offices in Principal Cities
EXPORT DIVISION: 75 WEST STREET, NEW YORK 6, N. Y.

We help new plants grow in Mid-America

New industries grow fast along the Illinois Central. We help many of them to locate along our lines.

New industries give a lift to both our community and business friends. Industry gets the kind of communities it needs, and communities get fresh payrolls to nourish their people.

Ask us for background information on any Illinois Central community in Mid-America. Address J. S. Frost, Director of Industrial Development, 135 East Eleventh Place, Chicago 5.



ILLINOIS CENTRAL
Main Line of Mid-America

INSTANT SPACE

Made in an **Air Structure** *by* **Imagineers** *at* **CIDAIR, Chicago**

Courtesy
Oak Ridge National Laboratory
Operated by Union Carbide Corporation
for the U.S. Atomic Energy Commission

CID AIR STRUCTURES COMPANY
Riverdale Station • Chicago 27, Illinois • VI king 1-1807

but also an ideal way of projecting a favorable corporate image.

The prime function of windows in the plant of tomorrow will be psychological. Sunlight is already an unwelcome visitor in the industrial plant, and improved economics of air conditioning have all but eliminated the use of windows for ventilation. The only function the window will serve in most plants will be to allow the employee an occasional look outside.

. . . Plant and community

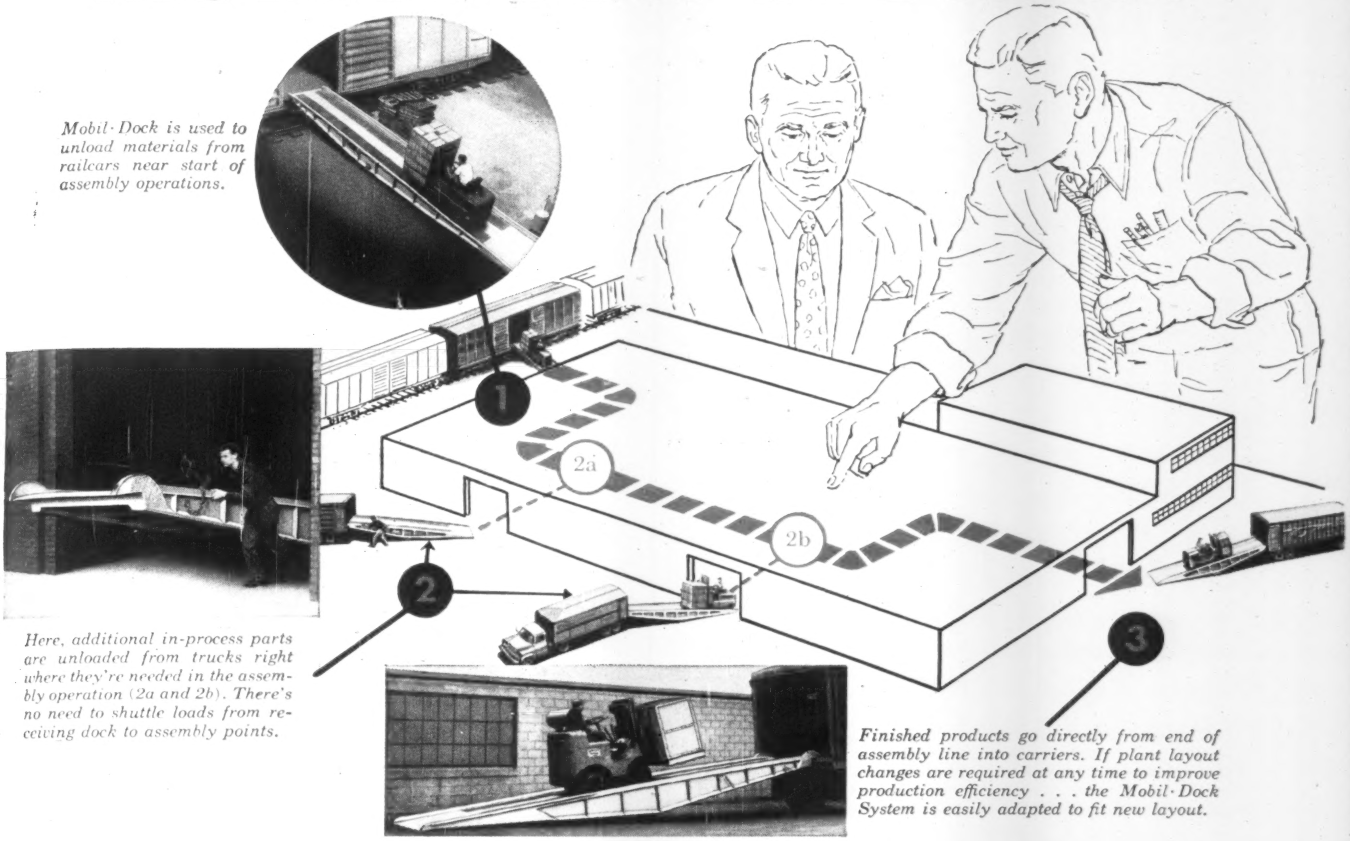
WILLIS N. SMITH, *Sherwood, Mills and Smith, architects, Stamford, Conn.*

To keep pace with our expanding population and economy, the factory of the future will have a very different appearance and will reflect a new concept. As our towns expand and grow together as they are already doing along the Atlantic seaboard, industrial planning must accept a new community responsibility.

Industrialists are coming to realize that their plants must contribute to the community environment in such a way that the factory of the future will not only be a pleasanter and healthier place in which to work but also will become a good neighbor. In order to do this, many changes must take place, the more important of which are:

- Elimination of smoke, odor, and noise.
- Wider acceptance of the idea of co-operation with community and neighborhood planners.
- Higher standards of design (esthetics) to a point where the community will be proud of its factories. Here is a potential gold mine in public relations benefits.
- More intelligent land use. This means better landscaping. It also means improved treatment of parking areas.
- Better working conditions inside the factory. This includes improvements in ventilation, air conditioning, acoustical control, odor control, color, lighting, floor materials, and so on.
- More and better employee services. Outdoor and indoor recreation facilities, lending libraries for books and records, auditoriums and other provisions for cultural activities will be the rule rather than the exception.

MOBIL·DOCK SYSTEM!



Mobil·Dock is used to unload materials from railcars near start of assembly operations.

Here, additional in-process parts are unloaded from trucks right where they're needed in the assembly operation (2a and 2b). There's no need to shuttle loads from receiving dock to assembly points.

Finished products go directly from end of assembly line into carriers. If plant layout changes are required at any time to improve production efficiency . . . the Mobil·Dock System is easily adapted to fit new layout.

NEW GROUND-LEVEL LOADING SYSTEM CUTS HIGH COST OF FIXED-POINT SHIPPING AND RECEIVING . . . ELIMINATES DOUBLE LOAD HANDLING!

Now you can layout, modernize or expand facilities to meet your changing production needs . . . quickly set up receiving and shipping points *exactly where they're needed* for fast, efficient low-cost handling! A Magliner Mobil·Dock System eliminates multiple-handling problems, cuts the high cost of fixed-point shipping and receiving! You load and unload where you want to . . . change plant layout when you want to . . . keep materials flowing on a *shortest-distance basis.* A *flexible, economical* ground-level loading system that fits an infinite variety of plant and warehouse layouts—brings big, important cost-savings wherever it's used! The application shown above is typical of how Mobil·Dock is saving thousands of dollars for large and small companies alike.

ANOTHER
MagLiner
PRODUCT

MAGLINER MAGNESIUM MOBILE LOADING RAMP: BASIS OF THE MOBIL-DOCK SYSTEM. A loading dock on wheels, the Magliner Mobile Loading Ramp is lightweight for easy one-man handling . . . ruggedly constructed to handle loads up to 16,000 lbs., more if you need it. Hydraulic lifting unit provides fast, simple height adjustment to truck or railcar floor. Heavy-duty non-slip grating tracks provide safe, sure all-weather power truck traction.

Send today for Engineering Bulletin MD-212

See how other companies engaged in manufacturing, processing, warehousing, etc., are solving high-cost materials handling problems with the Mobil·Dock System. **MAGLINE INC., P.O. BOX 33, PINCONNING, MICHIGAN**

MagLiner
MAGNESIUM
MOBIL-DOCK SYSTEM
Engineering Bulletin MD-212

MOBIL·DOCK

SYSTEM OF GROUND-LEVEL LOADING

Chicago

Philadelphia

New York

Editorial Round Tables Pinpoint Plant Problems

INDUSTRY'S PLANT

In three day-long round tables conducted by DUN'S REVIEW, scores of top manufacturing executives, architects, contractors, and consultants exchanged ideas on the specific problems in planning new plant facilities. Among their conclusions:

- To survive in today's—and more especially, tomorrow's—competitive climate, facilities must be planned in advance of needs.
- Rapidly changing technology and product obsolescence make decisions about plant facilities more critical than ever before.

Chicago

J. W. BARTLETT, *Divisional Vice President*, The Philip Carey Manufacturing Company

H. F. CAMPBELL, *President*, H. F. Campbell Construction Company

J. H. FIELD, *Manager of Commodity Sales*, Ceco Steel Products Corp.

MAURICE FULTON, *President*, Fantus Factory Locating Service

C. V. GREGORY, *General Sales Manager*, Reliance Electric & Engineering Company

JOHN KIRKPATRICK, *Manager, Midwest Division*—Miner Laboratories, Arthur D. Little, Inc.

EUGENE LANDIS, *Director of Transportation*, International Minerals and Chemicals Corp.

K. R. McCULLAGH, *Industrial Development Representative*, Illinois Central Railroad

WILLIAM M. NORTH, *Vice President*, National Gypsum Company

GEORGE C. PAYNE, *Field Office Manager, Office of Area Development*, U.S. Department of Commerce

GEORGE PHILIPS, *Engineering Economics Research Division*, Armour Research Foundation

PHILIP J. SCHMIDT, *Manager*, Industrial Development, Chicago, Rock Island and Pacific Railroad Company

GEORGE M. SHUTES, *Regional Distribution Engineer*, American Airlines, Inc.

FRANK STERN, *General Manager, Central Manufacturing District*, The Society of Industrial Realtors

RALPH STOETZEL, *Architect*

I. J. WARREN, *Special Representative*, Chesapeake & Ohio Railroad

New York

H. G. BUEL, *Vice President*, Wigton-Abbott Corp.

PHILIP CANNON, *Vice President*, Barrington Associates

ALONZO CLARK, *Project Manager*, Voorhees, Walker, Smith, Smith & Haines

H. PAUL CLEAVER, *Works Manager*, The Fuller Brush Company

RALPH E. CROSS, *President*, The Cross Company

RALPH S. CRUMME, *Vice President*, Abbott, Merkt & Company

GEORGE V. EVANS, *Manager, Distribution Department*, International Latex Corp.

IRVING FEDER, *President*, Irving Feder Company

JOHN GRIESSEN, *Project Engineer*, F. H. McGraw & Company

RALPH C. GULLEY, Skidmore, Owings & Merrill

ALLAN HARVEY, *President*, Dasol Corp.

CHARLES LEBO HOMER, *President*, Stran-Steel Corp.

E. W. KELLEY, *General Manager, Distribution-Sales Services Department*, General Foods Corp.

KENATH KETTLE, *Associate Director, Design and Construction*, Union Carbide Chemicals Company

Dr. STEVEN MALAKER, *President*, Cross-Malaker Laboratories

JAY J. MARTIN, JR., *Director, Supporting Services*, Arthur D. Little, Inc.

N. M. MARTIN, *Director of Facilities Planning Construction*, International Business Machines Corp.

I. H. MUNRO, *Vice President, Marketing, Solvay Division*, Allied Chemical Company

HUMPHREY NOLAN, *Assistant General Manager*, J. Gordon Carr & Associates

JOSEPH SCHLESSEL, *Manager, Customer Service Center Division*, Federal Pacific Electric Company

HERBERT B. SEYMOUR, *Vice President*, Wonder Building Corporation of America

EDWARD E. SHILE, *Vice President*, Palmer Shile Company

R. P. SUMBERG, *Controller, Research & Advanced Development Division*, AVCO Corp.

R. W. SYKES, *General Manager of Sales, Metal Buildings Division*, Inland Steel Products Company

JAMES B. TAYLOR, JR., *Vice President*, George A. Fuller Company

CHARLES F. THOMAS, *Market Manager for Industrial Building*, Butler Manufacturing Company

ROBERT WELCH, *Executive Vice President*, Steel Service Center Institute

FRANK L. WHITNEY, *Vice President*, Walter Kidde Constructors

Philadelphia

THOMAS A. BUCKLEY, *Vice President*, The Vendo Company

R. B. CARLSON, *Administrative Assistant to the President*, Prophet Company, Inc.

THOMAS CHERRINGTON, *Vice President*, The Jennison-Wright Corp.

MORGAN CHRISTENSEN, *Large Lamp Department*, General Electric Company

G. A. HECKSCHER, *Purchasing Agent*, United Engineers & Constructors, Inc.

E. J. HILE, *Public Relations*, General Electric Company

ARGUS LEIDY, *Vice President*, Globe Hoist Company

J. C. LUMBATTIS, *Vice President*, The Jennison-Wright Corp.

BRUCE F. MILEY, *National Accounts Manager*, Rudd-Melikian Company

DON PETRONE, *President, Typhoon Air Conditioning Division*, Hupp Corp.

JOSEPH W. ROBERTS, *Vice President, Marketing*, Muzak Corp.

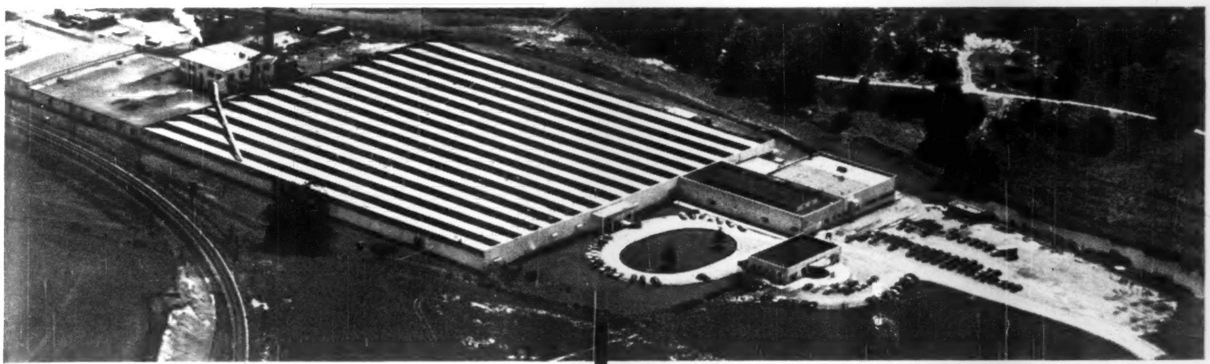
LESTER I. D. SMITH, *District Manager*, Mosaic Tile Company

CHARLES W. ZERWECK, *Vice President, Marketing*, Slater Food Service Management

---

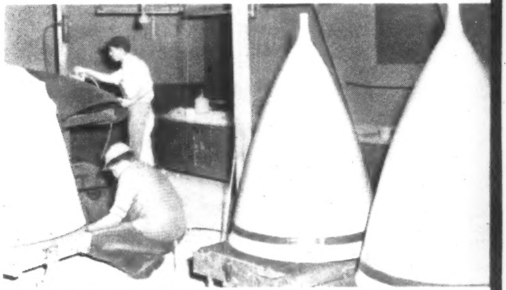
Reprints of this Special Report to Management, "Planning Tomorrow's Plants," are available at 30 cents each from Reader's Service Department, Dun's Review and Modern Industry, 99 Church Street, New York 8, N.Y. Please send payment with order.

Brunswick Finds Operations Profitable in VIRGINIA



OUTPUT DIVERSIFIED: Modern bowling equipment, school equipment and aircraft and missile components are produced at Brunswick's Marion plant, with production equally divided between plastic and wood. Shipments total 350 carloads per month.

EMPLOYMENT UP: An original work force of 177 has steadily increased to 1,450 employees in 1960. Local experience in plastics and woodworking was a factor in Brunswick's selection of Marion, Virginia, for its production facility.



PRODUCTION SOARS: Brunswick aircraft and missile components for defense are up sharply in production, as is school equipment. Bowling lane production has increased from 2,500 annually to 12,000. And the 325,000 sq. ft. plant has ample acreage for expansion. Another Brunswick facility, a 169,000 sq. ft. warehouse, is located at nearby Damascus, Virginia.

Nearness to raw materials was an important factor in Brunswick-Balke-Collender's choice of a plant site. Today at Marion, Virginia, Brunswick uses 2½ to 3 million gallons of water per month from a river running by the plant . . . 40,000 tons of coal a year from mines only 40 miles away.

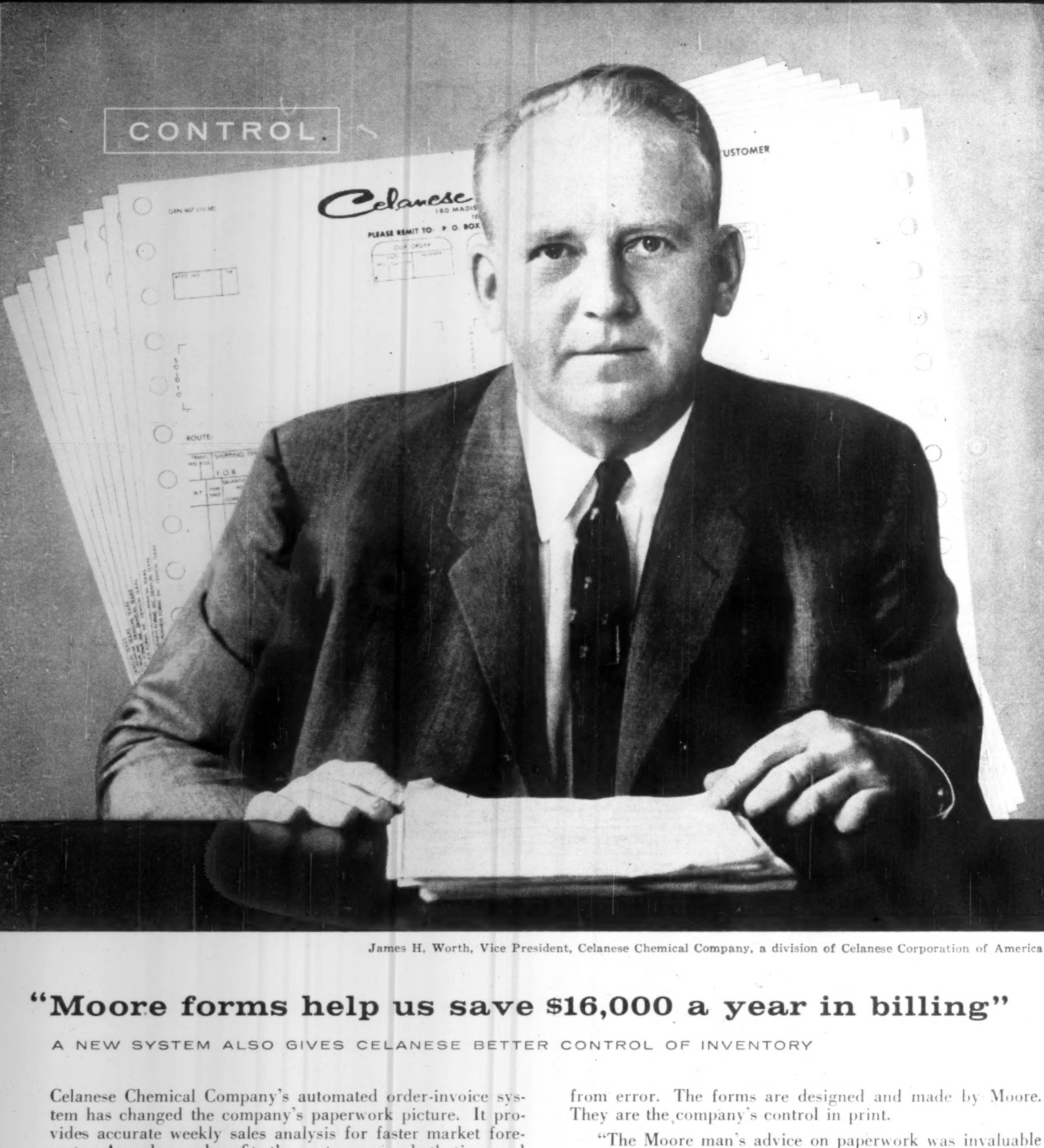
Abundant raw materials . . . and power . . . plus the dependability and vigor of its Virginia employees . . . have paid dividends to Brunswick. Employment has increased more than 8-fold, electrical use has doubled, plant and warehouse space has been increased more than 50%. Brunswick-Balke-Collender has found operations profitable in Virginia!

Let us tell you why so many companies are locating in Virginia. Phone, wire, write or visit in complete confidence . . .

C. M. Nicholson, Jr., Commissioner
Division of Industrial Development
Virginia Dept. of Conservation
and Economic Development
State Office Bldg., Richmond, Va.
Phone MIlton 4-4111 Ext. 2255

You, too, can find these... and many other great competitive advantages in **VIRGINIA**

. . . a wonderful place
to play or work



James H, Worth, Vice President, Celanese Chemical Company, a division of Celanese Corporation of America

"Moore forms help us save $16,000 a year in billing"

A NEW SYSTEM ALSO GIVES CELANESE BETTER CONTROL OF INVENTORY

Celanese Chemical Company's automated order-invoice system has changed the company's paperwork picture. It provides accurate weekly sales analysis for faster market forecasts. As a bonus benefit, the system saves both time and money—Celanese can handle 25% more billing with no extra operating costs.

Teletypewriters and electric accounting machines, working with punched tape and cards, do the job. They automatically print orders, invoices and summary reports on special forms. The forms in turn provide copies for every need. The chief operating benefits are the time saved (for example, invoices now go out the next day) and freedom from error. The forms are designed and made by Moore. They are the company's control in print.

"The Moore man's advice on paperwork was invaluable to us," said James H. Worth, Vice President, Celanese Chemical Company. You'll find the Moore man's knowledge of all kinds of systems can help you get the control your business needs. Look him up in the Yellow Pages, or contact the nearest Moore office. No obligation, of course.

MOORE BUSINESS FORMS, INC., Niagara Falls, N. Y.; Denton, Texas; Emeryville, Calif. *Over 300 offices and factories throughout the U. S., Canada, Mexico, Cuba, Caribbean and Central America.*

Build control with

MOORE BUSINESS FORMS

Managing Your Manpower

LAWRENCE STESSIN

FROM now on in, management and unions will be burning the midnight oil. For this is a fateful year in labor relations. Some 30,000 union agreements will come up for renewal in 1960. This hefty figure is not the result of the steel settlement. The chief architect of what might turn out to be another crisis period is the calendar. In March 1958, the bargaining trend for two-year agreements began. So 1960 shapes up as a year of decision in more than half of the organized companies in the country.

The list of companies which will grace the bargaining tables for the next nine months reads like a *Who's Who* of American industry. In aircraft, Boeing, Douglas, Convair, North American, and some smaller fry will be facing an unusual combination of union strategists. For the first time, Walter Reuther's United Auto Workers and the International Association of Machinists have joined forces and will make combined demands on the industry. The Westinghouse Electric Corp. and the General Electric Company will be coping with the president of the electrical workers union, James Carey, who in a show of bravura has declared his intention to strike if the companies "spurn the workers' demands." The General Electric sessions will be watched with more than passing interest by the cognoscenti in industrial relations.

The big change

Ten years ago, GE introduced a new look in collective bargaining, which the unions contemptuously labelled "Boulwareism." The GE approach was designed to effect a complete break with what had become tradition in collective bargaining. In place of the give and take, the wrangling, and the table-pounding which had become so characteristic of labor-management contract talks, Lemuel E. Boulware, vice president of GE (now retired), substituted the tactic of making a firm company offer almost at the outset and sticking to it in the face of any and all pressures. Most times, Boulware's "fair and firm" offer was accompanied by an active communications program to persuade employees to overrule their union leaders and accept management's proposals.

The Boulware technique (successful with GE) was adopted, with slight variations, by other companies and industries. The bargaining in steel had all the earmarks of the Boulware technique. For three months, the industry refused to budge from its original position, but finally, in face of union solidarity, management was forced into an almost complete capitulation. Whether the steel companies' collapse will bring a return to old-fashioned horsetrading at GE and elsewhere remains to be seen.

Year of the comeback

What makes the bargaining situation particularly sticky at this time is that organized labor sees 1960 as the "year of the comeback." Recruitment of new members has continued to lag. The exposures of union racketeering culminated in a Government crackdown on the activities of labor leaders via the Landrum-Griffin Act. Labor's loss of status and position is summed up like this by George Meany, president of the AFL-CIO:

"The disappointments of 1959 make it clear beyond a question that 1960 will be a year of battle for American labor. The opportunities that seemed so bright twelve months ago have been supplanted by the gravest attacks upon our movement in a generation."

Its victory in steel has no doubt given labor encouragement to forge ahead, at least on the bargaining front. But there are no signs that managements now in negotiation or about to begin are in a giveaway mood. Their resistance is not manifesting itself in any die-hard stance against increases in wages, pensions, and benefits. The 9- and 10-cents-an-hour pattern boost in base pay (evident long before the steel bargaining began) appears destined to continue. The tough attitude is showing up in the seemingly undramatic area of contract language.

"For years," says one labor relations director, "management has been guilty of letting careless language get into the contract. These day-to-day hassles over what this word or that clause means are what nibble away at our efforts to keep costs in line. Give me a good, clearly worded contract that keeps a lot of union 'shop lawyers' out of our hair, and I don't care much about the size of the across-the-board raise."

"Poorly worded clauses are like small holes in a boat. Sooner or later they'll sink you," comments another.

Conflicts over contract language usually arise for one of two reasons. Either a word or a phrase is used ambiguously, or management neglects to cover a situation which, with a little foresight, could have been clarified at the bargaining table.

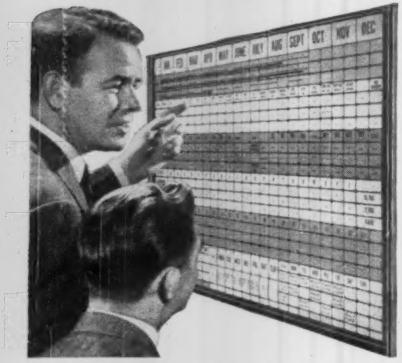
In interviews with DUN'S REVIEW, management men produced a host of examples of poor bargaining procedure.

One company had a contract which provided that management would "notify the union in advance" of any changes in production sched-

» *A rugged labor-management battle shapes up as bargaining begins on 30,000 union contracts.*

» *The right-to-manage issue turns management attention to the need to firm up contract language.*

How To Get Things Done Better And Faster



BOARDMASTER VISUAL CONTROL

- ☆ Gives Graphic Picture—Saves Time, Saves Money, Prevents Errors
- ☆ Simple to operate — Type or Write on Cards, Snap in Grooves
- ☆ Ideal for Production, Traffic, Inventory, Scheduling, Sales, Etc.
- ☆ Made of Metal. Compact and Attractive. Over 500,000 in use.

Full price $49.50 with cards

FREE 24-PAGE BOOKLET NO. D-400 Without Obligation

Write for Your Copy Today

GRAPHIC SYSTEMS

Yanceyville, North Carolina

CLEAR PLASTIC WINDOW PROTECTS AND KEEPS LABEL CLEAN
OPI
The Original
"Slip-on"

LABEL HOLDERS for Ring Binders

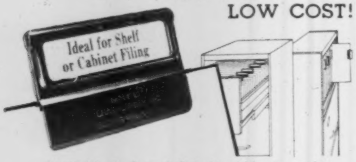
For Filing and Indexing Ring Books—Neat Appearance Plus Sturdy Construction

*Patented

Smith's

OPNWINDO® Metal Tabs

solve filing problems at LOW COST!



Ideal for Shelf or Cabinet Filing

Available in 1 and 2 inch widths to revise your present filing system or convert to shelf filing. Complete with clear or colored plastic windows.

Complete line for labeling, filing and indexing
Sold through Stationers only—or write

Office Products Inc.

P.O. Box 6677 • 26029 W. 8 Mile Road
Detroit 40, Michigan

or CHARLES C. SMITH, INC.
Exeter, Nebraska

West Coast Distributor: Arch K. Ansty
171 2nd St., San Francisco 5

uling. When a change came up, the company sent the union a memo and went ahead with the new plan.

"You can't do this," the union maintained. "Notification implies *discussion*. Let's talk about it."

When the employer insisted that his interpretation was correct, a short wildcat strike resulted. The company disciplined the men involved and lost a week's production in their department.

A costly omission

Sins of omission can be just as costly. In the interest of better production, a company decided to cut out a group of jobs and assign some of the duties to other employees. The union complained. It maintained there was nothing in the agreement that gave management the right to eliminate jobs. A perusal of the contract indicated that the union was right—not a word about pruning jobs when business took a turn for the worse. Finally, the company decided to wait for renegotiation time—two months away—before exercising what it felt was its prerogative.

One problem which often keeps negotiators on both sides of the table in overtime sessions is subcontracting. Here, the company assigns some of its work to an outsider because it can get it done cheaper that way. When the management has had the foresight to provide in the bargaining contract for the right to let work out for economy reasons, it has no trouble. But management is often lax in protecting itself on this score. When one company recently decided to eliminate its trucking operation and turn deliveries over to an independent contractor, it had a week-long battle with the union.

"Show us in the contract where you have a right to do this," the union demanded. Management couldn't. The issue was finally compromised with the understanding that the company would continue "the old way" for a period of six months.

Another industrial relations man gave this example of how the nuances of language can cause misunderstandings that waste valuable time:

The company had a rule that if an employee was going to be absent, he must phone in advance. A worker did so. "I have to stay out tomorrow, so I'm calling in to tell you," he told his foreman.

"Why are you staying out? I think you should give me a reason," the foreman said.

"Personal reasons. The contract doesn't say I have to give you a reason. It only says I must notify you."

When the worker was disciplined, he raised a protest. To avoid endless debate, the management capitulated but made up its mind to plug that loophole at the next negotiation.

Overtime is an issue that causes frequent conflict because of poor negotiation techniques by management. Consider this situation. The contract provided for a 40-hour week. Came an emergency, and the employer asked his workforce to put in four hours extra—at time and a half. The crew refused.

"You must," said the boss. "I have a right to ask you to work a reasonable amount of extra time at time and a half rates."

"We don't have to," the union insisted. "The agreement calls for 40 hours, and if we work extra, it's voluntary."

Unions, too, grieve over "sins of omission." Collective bargaining is a two-way street, and sometimes the labor organization has overlooked a subtlety or two when dotting the "i's" or crossing the "t's" in a labor pact. One union agreed to a clause in a contract which said that the company could discipline an employee "for cause." When a worker was discharged for what the union felt was not "reasonable cause," the management countered:

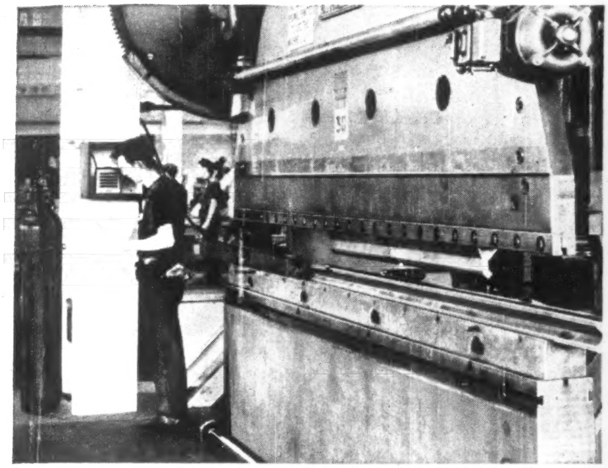
"The agreement doesn't say 'reasonable cause.' It says 'cause.' That means we can fire for *any* reason."

Other 1960 issues

Language is not the only bargaining issue on the horizon. Management negotiators are seeking to win other advantages. Many companies are trying to get agreements which allow scheduling vacations years 'round. Most contracts limit the vacation periods of workers to the spring and summer months. This hurts scheduling. It's easier to plan if vacations can be spread over the year, say some companies. Union resistance to this demand is said to be tough.

Of greater import is the issue of disciplining wildcat strikers. Unions agree that management has a right to take action against workers who walk out in violation of the union agreement. But if 200 employees go out on an unauthorized strike, the

How Canadian General Electric Gets Up-to-the-Minute Cost Data at Less Expense!



When starting and finishing a job, employee talks into nearby Executone, reporting clock number, job, and machine numbers to centralized timekeeping office. No time is lost walking to make reports, waiting in line, visiting with friends.

When call comes in, girl records all data on pre-punched cards. Data is processed and analyzed by management within hours instead of weeks. Errors are spotted quickly, corrective action can be taken while job is still running.

Executone reduces time lag by two weeks—Savings more than pay for system!

At the Canadian General Electric plant at Guelph, Ontario, Executone Centralized Timekeeping has proved itself an invaluable management tool—

- Three girls now handle the work. Elimination of in-plant timekeeping released eight employees for other duties.
- Labor costs are compiled within 24 hours instead of two weeks.
- Employees gain productive time because less time is lost walking, waiting and visiting when making job reports.
- Down time is cut. Machine breakdown, lack of materials, etc., are reported immediately. Corrective action is taken while job *is still running.*
- CGE has gained 700 sq. ft. additional production space by eliminating Timekeeping Centers.

Executone Can Do It For You!

With Executone, data gathering becomes an easy way to obtain your labor cost information at the source and channel it directly from the factory floor to a centralized timekeeping office in a matter of *seconds.* No matter what the size of your operation, your local Executone man can help you plan a system to fit your exact requirements. For full information, send coupon below today.

Executone, Inc., Dept. K-2, 415 Lexington Ave., N.Y. 17, N.Y.

Without obligation, please send me the following Centralized Timekeeping Information:

☐ Production Control ☐ Incentive Plan Control
☐ Cost Control ☐ Other Case Histories
☐ Name of Local Representative

Name____________________
Company____________________
Address____________________
City__________ **Zone**____ **State**____

In Canada—331 Bartlett Ave., Toronto

Executone

CENTRALIZED TIMEKEEPING SYSTEMS

company cannot discharge or lay off the whole lot. Management wants the authority to pick and choose who should be taught a lesson. Arbitrators have not allowed management to do this. "All or none," has been the dictum. Steel negotiators got nowhere in trying to win authority to discipline a "select few." END

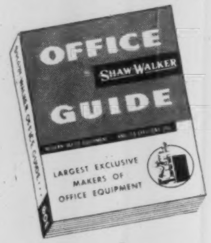
Labor Tips and Trends

At Your Service

A rather dormant union demand has been revived. It is for the so-called "agency shop." Under this kind of arrangement, workers who do not belong to the union must still pay dues as a "service charge." The union argument is that even if employees don't belong to a union which has a contract with an employer, they receive the benefits of union representation. Under the law, the union represents all the workers in a bargaining unit, including those who do not formally belong. Non-union workers can have their grievances handled by the labor organization, for example. The new steel agreement provides for the agency shop in those areas where there are "right-to-work" laws. It is this concession that has given new life to the proposal.

Manhunters Organize

Executive recruiters—firms that specialize in hunting out high-priced manpower for management ranks—have been operating without benefit of publicity. It was considered "gauche" or unprofessional for these talent scouts to blow any public relations horns. Their functions were considered confidential, their client list sacred. Reason: No company wants it publicly known that it is hunting for top talent. Now the executive recruiters feel they have acquired enough status to warrant forming their own professional organization. The Association of Executive Recruiting Consultants is the formal name of a dozen outfits specializing in high-level personnel searching. Basic qualifications of these firms is that they receive fees only from a client organization, never from the individual, and they concentrate on positions for which salaries are $15,000 or more.


OFFICE
SHAW-WALKER
GUIDE
LARGEST EXCLUSIVE MAKERS OF OFFICE EQUIPMENT

From this "idea book"

...ways to cut office costs

What's your office problem? Whether it's to cut office costs, save space, make the individual office worker more efficient or improve office appearance, the new 248-page Shaw-Walker Office Guide can help you.

It also pictures, describes and prices 5000 items—Clutter-Proof desks; Correct seating chairs; Filing cabinets in 347 styles and models; Simplified filing systems; Fireproof record keeping equipment; Automation accessories. A gold mine of *ideas.*

FREE *to office and purchasing executives:* Request on business letterhead or phone your Shaw-Walker representative.

SHAW-WALKER
MUSKEGON 33, MICHIGAN

MAKE SHORT WORK OF LONG LISTS!

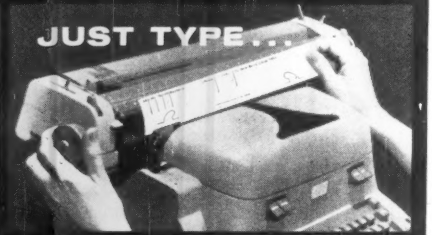
ACME VISIBLE PHOTO PANELS

Just slip in a new card instead of retyping a whole list

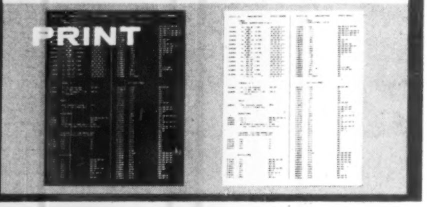
Make changes in minutes! Each item on your price or parts list . . . your catalog, directory or index is typed on a separate card. This slips securely into an Acme Visible Photo Panel . . . ready to be photographed for duplicating. No type to set. And, to make changes, just remove old cards, type and insert new ones. No redoing. Acme Visible can also prepare and maintain lists for you. Send coupon for details.

ACME VISIBLE

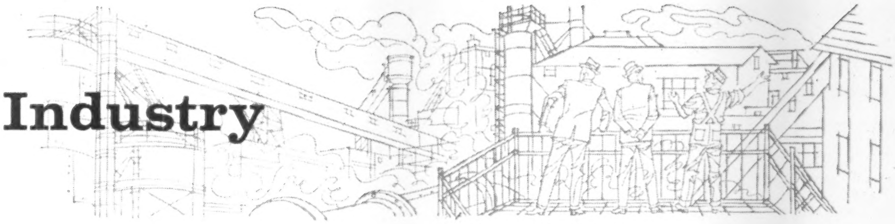
Acme Visible Records, Inc.
1103 West Allview Drive, Crozet, Va.
Please send free booklet on Photo Panels for time saving preparation of directories, catalogs, price and parts list, etc.
Name________
Title________
Company________
Address________
City________ State________



Photograph or photostat panel . . . print with standard office duplicating equipment



Inside Industry



- *New devices for weighing and counting*
- *Now thermoelectric AC*

One by One

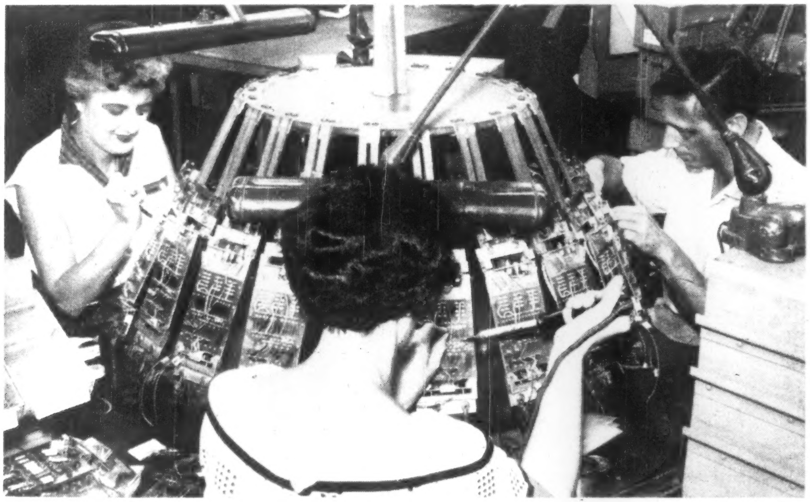
Although weighing and counting are not particularly glamorous aspects of manufacture, they are still essential. Today, new developments in what were once hand operations are supporting and complementing mechanization and automation of production machines. And where new technology permits the physical incorporation of the weighing or counting device in the production or materials handling machine, industry now is able to achieve new highs of control and accuracy, free of human error or sloppy interpretation.

The heart of many of the new generation of weighing devices is the load cell. Inside the cell is an elastic (metal) element which supports the weight being measured. The deflection of this element as weight is applied is picked up as an electrical signal.

Because this signal is then handled electronically, weighing can take place under adverse conditions. For example, a hopper car can be weighed while it is vibrated by a discharge mechanism. The vibrations are picked up by the load cell but can then be filtered out in the electronic apparatus to give the true *static* weight of the car. With load cells, a moving truck or railroad car can be weighed.

Because these highly accurate cells are so compact, they can be installed in the most inconvenient places to weigh something. They have even been installed in crane-hook assemblies to tell how much the crane is lifting.

The ability of the new weighing machines to sense over- or underweight can pay big dividends. Customer wrath is avoided if no product goes out underweight, and the company can cut losses on overweight products.



WHEEL OF PROGRESS: *These assembly wheels, manned by a crew of three, are replacing straight production lines and conveyer belts for electronic equipment at the Martin Company, Baltimore. Each worker does one-third of the work on each board before the wheel rotates 120 degrees. Three intervals between steps can be set, depending on the complexity of the boards, from two to 180 minutes.*

Accurate automatic weighing equipment is also being incorporated in metal-cutting equipment for control. For example, the Snyder Tool & Engineering Company, Detroit, has built a piston-milling machine whose depth of cut is electronically controlled by the weight of the part.

By means of new weighing devices, the many manufacturers of products calling for bulk mixture can produce far more uniform products. Instead of filling large bins with the various ingredients and then weighing them on a conventional scale, a system of push-button controlled pneumatic or mechanical conveyers can bring the ingredients to a central mixing bin or vat.

Another feature being added to many conventional scales is the "printout." Whenever something is placed on the scale, the weight is automatically printed on a roll of paper or on individual sheets of paper. The printout device can be remotely located. In addition, a "memory" in the printout can remember the weight of an object and report it later on as desired.

Thermoelectricity Advance

Thermoelectricity—one of the exciting new ways of making electricity without any moving parts (see DUN'S REVIEW, August 1959, page 78) has

ARE THESE MARKETING DECISIONS YOUR PROBLEM?

If you sell to the new construction market,

DODGE CONSTRUCTION STATISTICS can help you

- in determining whether you're losing or gaining ground in your market;
- in making valid short-term predictions—to control inventory, production and promotion;
- in setting realistic sales quotas;
- in evaluating performance vs. potential for individual salesmen and distribution outlets.

send for this free booklet

F. W. Dodge Corporation, Dept. DR30
119 West 40th Street, New York 18, N. Y.
Please send me your booklet: "Dodge Construction Statistics . . . for Better, Safer, More Profitable Business Decisions."

Name ....
Title ....
Company ....
Address ....
City ....Zone....State........

F.W. DODGE CORPORATION

F. W. DODGE CORPORATION

DODGE CONSTRUCTION STATISTICS

VOYAGE TO THE EARTH'S CENTER: *This apparatus duplicates conditions deep inside the earth, the high pressures and temperatures at which gems and unusual minerals are formed. Working with this apparatus at Battelle Memorial Laboratory, physicist Wendell B. Wilson created a new uranium oxide* U_3O_8*, hitherto unknown. The machine can create pressures up to 2 million pounds per square inch at 3,600° F.*

only been thought of in terms of direct current. Yet, well over 99 per cent of the electricity sold in this country is generated as alternating current. Now a General Dynamics Corp. scientist has developed a technique for generating 100kc AC directly from heat by thermoelectric methods.

Today, in the very early stages of the system's development, its efficiency is nothing to write home about—only a small percentage of the input energy is converted into electricity.

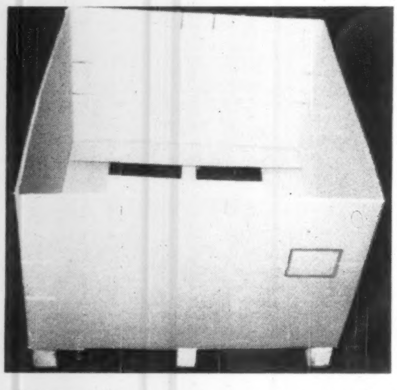
But, its inventor, Dr. Robert W. Pidd, is hopeful of a great improvement in efficiency.

Plants Showing Their Age?

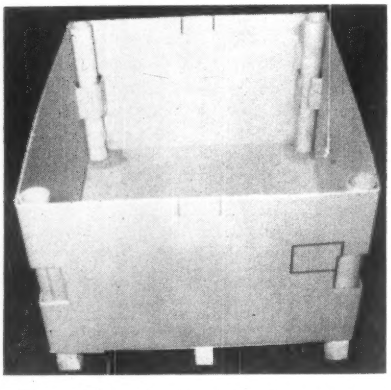
The production facilities of American industry are old—just plain old!

A new study by the Machinery and Allied Products Institute shows that the average age of equipment in use today is nine years, a reduction of only two years since the end of World War II. Undoubtedly, the advanced age of the equipment is due to a postponement of capital expenditures during the 1957–58 recession and to overcapacity in some fields.

The same study also reports that the average age of plant structures is 24 years, down only three years

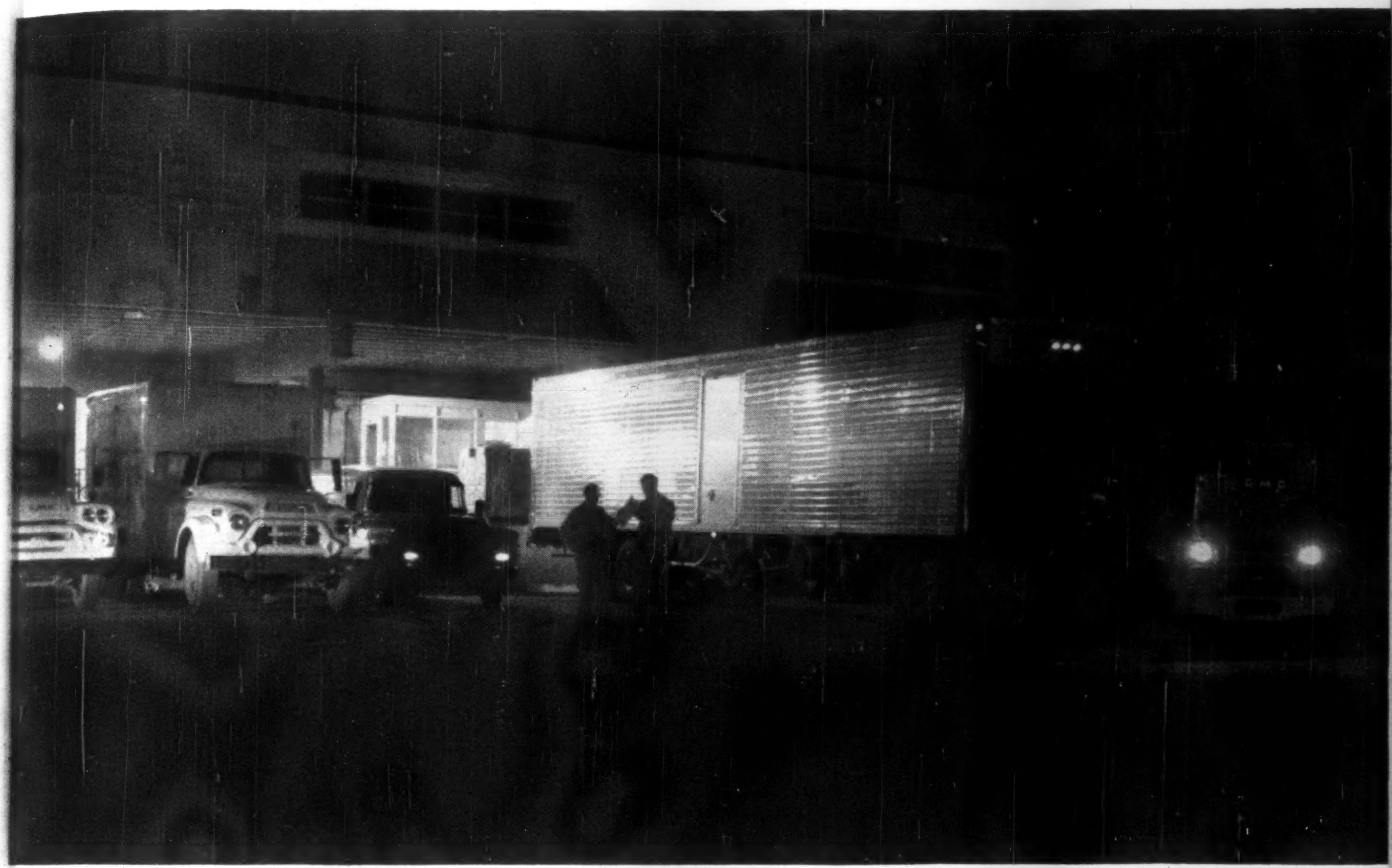


BEFORE: *This is the inadequate corrugated box in which small metal stampings were originally shipped from the Cleveland stamping plant of the Fisher Body Division of General Motors Corp. The box was not rigid enough to permit stacking. But it was cheaper than a box with stronger walls.*



AFTER: *The plant's packaging engineer came up with a cost-cutting solution which also solved a waste-disposal problem. Heavy paper rolls on which car upholstery fabric is delivered are now cut in half to form strong corner supports for the box. The rolls were previously discarded.*

"Now that we've leased this Hertz tractor and trailer, we even give door-to-door service on LTL orders!"



Ship on schedule! Lease Hertz long-haul equipment

NO INVESTMENT...NO UPKEEP

Tired of late pick-ups—late deliveries for less-than-truckload shipments? Switch to Hertz and get custom-engineered tractors and trailers. We'll supply new GMC, Chevrolet or other sturdy trucks or buy your present units, recondition them, and lease them back to you. Either way, Hertz takes over all repairs and maintenance.

Hertz reduces all your fleet accounting and upkeep problems to the writing of one budgetable check per week. You get out of the truck business and back into your own business. In addition to long term truck leasing, Hertz also *rents* extra trucks by the hour, day or week for your peak periods or any emergency. Rely on Hertz—America's No. 1 truck lessor—with more than 500 stations in the U. S. and Canada.

HERTZ
TRUCK LEASE ®

For more information, call your local Hertz office. Or write for the fact-filled booklet, "How to Get Out of the Truck Business," to Hertz Truck Lease, Dept. B-3, 218 South Wabash Avenue, Chicago 4, Illinois.

YOUR NAME
GMC

Executive with a problem found the answer in a U.S.E. Special Duty Envelope

This envelope rubs shoulders with bundles of steel! It serves as a shipping tag and carries the shipment papers. Name and address of company is printed on the envelope, and the name and address of addressee appears in the transparent window. By fulfilling its function perfectly it is speeding operations and reducing errors.

Department 16
Rolling Mill
Plant Extension X

Our experience and facilities are available to help you develop a U.S.E. Special Duty Envelope for mailings, business systems or packaging. The whole fascinating story is told in a book: "HOW EXECUTIVES SOLVE BUSINESS PROBLEMS with U.S.E. Special Duty ENVELOPES." It's free . . . please have your secretary drop us a line.

United States Envelope Company

General Offices • Springfield 2, Massachusetts

Business benefits wherever the envelope is an executive decision

from the high of 27 at the war's end.

Although it's not possible to generalize about the need to replace aging equipment—each must be evaluated on the basis of the ability of a more costly replacement to pay for itself—the implication of the study is that American industry could stand a wholesale modernization. This would, of course, be the view of machinery manufacturers, but there is much to be said for their conclusion when the average age of American equipment is compared with that of foreign plants, especially those whose output is pouring across our borders.

The Boom in Bitumen

Spectacular "breakthroughs" may be the most exciting product of R&D, but for most companies they're not the most vital. Finding new uses for familiar materials often proves a far more profitable goal. For proof, look at what's been happening to asphalt, the unglamorous tarry stuff Noah reputedly used to caulk his ark and Columbus his ships. In the past ten years, production of this low man on the refining totem pole has gone up 100 per cent as a result of intensive research into new applications. Most of the goo goes underfoot in streets and highways, an application that Nebuchadnezzar's engineers developed in 600 B. C. But new uses on farms, in home construction, and in the prevention of beach erosion are claiming an increasing proportion of our annual output of 20 million tons of this heaviest of hydrocarbons, which the ancients called "bitumen."

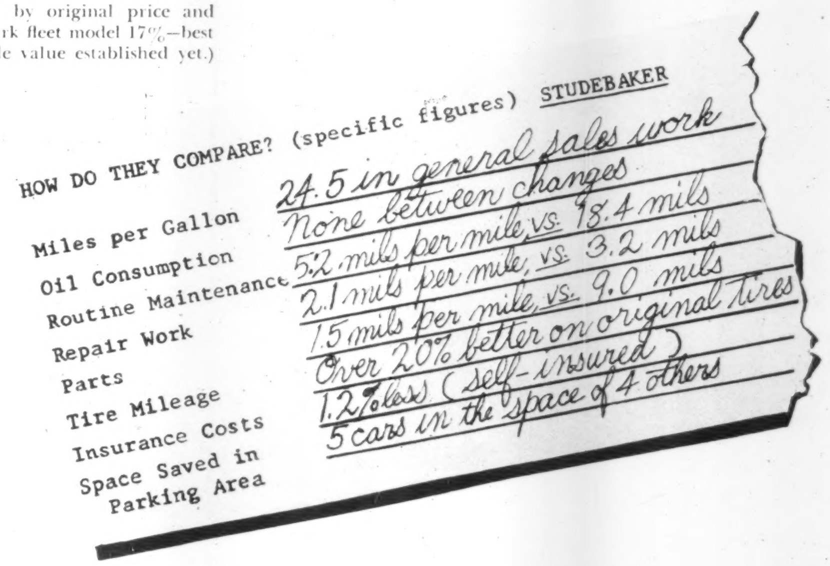
Asphalt is regaining favor with highway engineers since better ways have been found to mix asphalt and aggregate into a paving material. And because asphalt is waterproof, it offers the nation's farmers, and industry too, a cheap way of conserving water. For example, about 35 per cent of the water in irrigation canals is lost in transit through seepage. Lining the canals and ditches with a thin layer of asphalt cuts the losses.

The Esso Research and Engineering Company, Linden, N.J., is developing a thin asphalt film to stimulate growth of grass in dust bowl regions. The film holds in the soil's moisture while the grass seeds are germinating. It lasts only for the five or six weeks it takes for the blade of grass to break through. —M.M.

LARK THE ONLY COMPACT FLEET CAR THAT GIVES YOU ALL SIX BASIC ADVANTAGES

LARK PRESENTS PROVEN FACTS, NOT HOPEFUL CLAIMS— ON 6-PASSENGER CARS, NOT 5-PASSENGER SUB-COMPACTS!

1. LOWEST NET COST PROVEN by original price and official trade-in value. Depreciation on Lark fleet model 17%—best of its class. (New compacts have no resale value established yet.)



HOW DO THEY COMPARE? (specific figures) STUDEBAKER

Miles per Gallon 24.5 in general sales work

Oil Consumption None between changes

Routine Maintenance 5.2 mils per mile vs. 18.4 mils

Repair Work 2.1 mils per mile, vs. 3.2 mils

Parts 1.5 mils per mile, vs. 9.0 mils

Tire Mileage Over 20% better on original tires

Insurance Costs 1.2% less (self-insured)

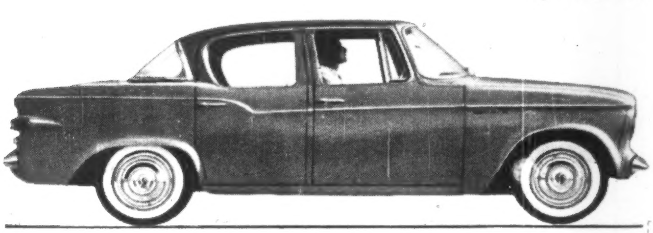
Space Saved in Parking Area 5 cars in the space of 4 others

2. LOWEST OPERATING COST PROVEN by actual records of fleet operators all over the country. "Save $40 a month on each Lark" (equipment sales company, California)—"Savings on each taxicab would buy a new cab in 2½ years" (taxi fleet, Massachusetts).

3. LOWEST MAINTENANCE COST PROVEN by fleet records. "Saving 33%" (taxi fleet, New York) —"Over 25,000 miles on each Lark in severe Police service—with minimum maintenance" (police department, Indiana).

4. LOWEST REPAIR COST PROVEN by fleet records "2.1 mils per mile, against 3.2 mils per mile" (car rental, Colorado)—"No repairs, no new parts, after 10,000 miles on each Lark" (telephone company in Oregon).

5. LOWEST INSURANCE COST PROVEN by fleet operators' records (most insurance companies offer 10% or 15% premium discount on Lark-size cars, same savings possible if you self-insure.) "Have lowest available rate" (taxi fleet, Minnesota)—"Lark costs 20% less in our self-insurance plan" (bakery fleet, Arkansas).



6. BEST DRIVER ACCEPTANCE PROVEN by fleet owner reports. "In all cases our customers have been very pleased with the performance and appearance of The Larks, and we are getting repeat requests for them, the surest sign of satisfaction" (car rental, Ontario)—"All drivers prefer Studebakers to all other units" (taxi fleet, Wyoming).

We invite you to make us prove these advantages — from records of companies in your own field of business. Send this coupon! →

Budget-wise buyers

LOVE THAT LARK *BY STUDEBAKER*

SEND ME PROOF OF LARK SAVINGS

Please print. Send to Fleet Sales Division, Studebaker-Packard, South Bend 27, Indiana.

NAME ____________________

TITLE ____________________

COMPANY ____________________

ADDRESS ____________________

DR 3-60

TOO MANY
PERSONAL
CALLS?

CURE THIS WITH P·A·X BUSINESS TELEPHONE SYSTEM

The ailment: This clerk *needs* a telephone for inside calls. But she's using it for outside calls, too—tying up lines you need for your *customers.*

The cure: The Automatic Electric P-A-X business telephone system — the "own-it-yourself" *dial* system for interoffice communication. Each employee who needs inside service is given a P-A-X phone; only those who *need* outside service are given "outside" phones. P-A-X saves time—saves effort—saves money. It gives you inside telephone service that's lightning-fast — the kind that *gets things done!* And it frees your operator, your switchboard, and your "outside" phones for the service of your customers. P-A-X assures quickest service for important inside calls, and for outside calls, too.

So if small talk gets in the way of big business—investigate P-A-X today. Write Director, P-A-X Sales, Automatic Electric Sales Corporation, Northlake, Illinois.

AUTOMATIC ELECTRIC

NORTHLAKE, ILLINOIS

It's the SECOND Telephone that marks the efficient executive!

Living with the Law

PAUL A. KING

Safeguarding Trade Secrets

Minnesota Mining and Manufacturing Company had every reason to be upset when their trusted assistant supervisor of quality control went to work for a competitor. He took with him company know-how on manufacturing pressure-sensitive masking and cellophane tapes.

3M had spent more than $3.5 million in research to improve the manufacture of those tapes, and this employee had access to the results. Further, he had agreed not to divulge company trade secrets or work for a competitor for a period of one year after termination of his services.

3M sought solace by taking the employee and his new employer before a New York court for damages and an injunction—and was granted both.

Because of increased executive turnover and because today many companies rely on keeping their know-how secret as much as they do on the protection afforded by their patents, court rulings of this kind are encouraging. They tend to discourage the executive pirating that is motivated by trade secret acquisition. (See "Your Company's Secrets: Are They Safe?," DUN'S REVIEW, August 1958, page 44.) And there seems to be a lot of job jumping these days.

Pirating engineers

From a survey of 1,886 executives, Hoff, Canny, Bowen and Associates, Inc., New York management recruiters, concluded this about engineers: "The big companies compete strenuously for engineers from the time of their graduation. There has been more pirating in this field by the companies themselves than in any other area." And it's the engineers, for the most part, who are trusted with research and development secrets.

How can you keep employees from running away with your trade secrets? Apart from the usual personnel techniques for retaining employees, some companies have found it helps to require employees to sign keep-secret agreements. If properly drafted and applied, these agreements can be of value—not only because they can be enforced in courts of law but for their psychological effect. Both the departing employee and his prospective employer will think twice before an employment marriage is consummated if it involves illicitly acquiring the predecessor's trade secrets. Most employers prefer to steer clear of legal entanglements, particularly if they are likely to make the newspapers. Thus, many companies notify the employee's prospective employer that he has signed a keep-secret pact.

No-work agreement

Since it's hard to find out when a former employee spills a trade secret, many companies go further and also obligate the employee to refrain from competing or working for a competitor for a reasonable time.

Such agreements, to be enforceable in court, must be carefully drawn. Left to the natural instincts of preserving their businesses at all costs, some employers are apt to go overboard—throw the book at the employee, tie him up too completely. Since the courts of any one of 50 states may be called upon to enforce these agreements (companies with country-wide activities cannot predict which state court may be called upon to handle a future case), this broad principle of general application should be kept in mind:

"In determining the extent to which restrictions on future employment are proper, there are a number of conflicting equities to be considered. On the one hand, there is the right of the employer to protection for his trade secrets. On the other hand, there is the right of the employee to receive compensation for his knowledge, skill, and experience. The restraint on the employee should not be greater than is reasonably necessary for the protection of the employer's rights and property." (*Trade Secrets* by Ridsdale Ellis.)

Enforcement tip

The key is: For maximum enforceability, not only keep the limitations on employee employment activity down to the bare minimum, but require only employees in sensitive spots to sign such agreements.

When called upon to enforce an agreement to keep secret or not work for a competitor, courts ask these questions: Was the employee engaged in routine work or had he access to the company's trade secrets? How high up the executive hierarchy was he? How much time did he spend on the secret work? Are the trade secrets of vital or passing interest to the company? How much money, time, and effort was spent in developing the

- *How keep-secret pledges can prevent footloose employees from leaking valuable company know-how to competitors.*
- *New survey reveals half of responding companies maintain "house counsel" to handle burgeoning legal work.*
- *Copywriting of fabrics and other goods proves effective in punishing commercial design piracy.*

Introducing the New
SELECTRIC®
FILE

AVAILABLE IN
4 BASIC MODELS,
EACH WITH A WIDE
RANGE OF CARD SIZES
AND CAPACITIES

WRITE
FOR
COMPLETE
CATALOG

NEW OPPORTUNITIES IN MASS CARD FILING

The four major advantages of the LeFebure SELECTRIC FILE are increased efficiency, reduced reference fatigue, savings of space and improved accuracy. You eliminate unnecessary walking, reaching, stooping, pushing and pulling. Traffic is reduced by concentrating reference. Production is increased by keeping operators at work stations. The SELECTRIC FILE brings cards to the operator, instead of having operators chase after the cards.

All controls are simple, within easy reach. Convenient desk-high work surface. No record is more than 1½ seconds away from the operator.

CHOICE OF REMOVABLE TRAYS

Removable trays rotate into the most efficient reference position, at tested reference height for convenience. These removable trays make conversion simple — all you do is transfer cards from your present files to the SELECTRIC FILE. Will handle all card sizes.

LeFebure Business Systems and Equipment
LeFebure Corporation, Cedar Rapids, Iowa

An Affiliate of Craig Systems, Inc., Lawrence, Mass.

data? Is the employee's knowledge commonplace and something that any workman is apt to pick up at his bench? What effect will the secret in the hands of a competitor have on the originating company? What disasters will be wrought? Is the employee's new company really a competitor? How long would the employee be prevented from working for a competitor if the agreement was enforced? Are there other fields of work available to the employee? Is he being compensated for remaining idle, that is, not working for a competitor? (A "yes" response is not absolutely necessary but would increase the likelihood of the court's enforcing the restriction.)

What do companies generally include in their employee agreements? Briefly, you'll find the following types of provisions:

- The employee agrees not to disclose confidential information acquired in the course of his employment to any third party without prior written approval of the company. This obligation, of course, applies during employment, and companies generally bind the employee to secrecy for a period after termination ranging from two years to perpetuity. The shorter the period, the more likely the obligation will be enforced as a rule. Five years is a good time period.
- During employment, the employee agrees to turn over to the company all of his inventions, patentable or not, which relate to the company's business. He agrees to cooperate by making notes and descriptions of his ideas for the benefit of the company and aiding it to secure patent protection. The obligation of cooperation survives termination. (Some companies pay the employee extra for his inventions.) A good many companies require the employee at the time he executes such an agreement to list all inventions conceived prior to his employment. This will avoid future disputes as to when inventions were conceived.
- The employee agrees not to take out of the premises drawings, documents, and other confidential data and not to make copies for himself.
- The employee agrees not to work for a competitor of the company and agrees not to compete himself. This obligation generally runs from six months to three years. Here, too, for greater likelihood of enforceability, the shorter the period the better. But

a company can agree to pay its employees for not competing. The amounts could range from half pay to full pay and run from six months to one year.

An arrangement of this nature would strengthen the agreement not to compete—improve its chances of enforcement. If a secret is worth preserving, the idle pay is worth dishing out.

When should employees sign the agreement? The best time is when they are hired. Some courts may not enforce an agreement entered into during employment. But the law is far from certain. It's worth a try if you want to embark on such a program in midstream.

Should officers of the company be asked to sign such agreement? Generally speaking, officers of a corporation operate under an implied obligation not to disclose or use corporate secrets for their own benefit. However, it's prudent not to make an exception—particularly if the next echelon of executives are required to sign up. Helps smooth employee relations.

The Lawyer in Business

It looks as if the lawyer has moved in on the business man. In summarizing its survey of legal practices of 286 companies, small and large, the National Industrial Conference Board pointed out: "Business today is beset by such a multiplicity of laws and administrative rulings that many companies require 'house counsel' as well as outside counsel to provide them with the necessary legal guidance."

The NICB reported that almost half of the companies participating in the survey maintain their own legal departments. These are the larger companies with more than 1,000 employees. But all companies indicated they use outside counsel some time, and three-fourths retain such counsel on a continuing basis.

For an excellent practical summary of how house counsel operates in a large company, send for the Winter 1960 issue of American Cyanamid Company's magazine, *The Cyanamid*. It tells the story of how that company's legal division functions and describes the role it plays in corporate affairs. Write to the Public Relations Division, American Cyanamid Company, 30 Rockefeller Plaza, New York.

continued on page 146

Stenocord®

for error-free dictating and transcribing

Stenocord helps you do more in less time at less cost . . .

For private dictation or conference recording, start, stop, review, erase or correct . . . no need to worry about pushing the wrong button—there's only one!

STENOCORD'S reusable MAGNETIC BELT *is proved best.* Fold it, mail it, file it, use it hundreds of times over — you'll get true fidelity every time!

No other dictating machine — at any price — will help you do your job as easily and as well. Your first five minute test will prove that STENOCORD incorporates all the best features of expensive machines — without their drawbacks. Here are just a few of the many features you will find: Light, magnesium-alloy body for easy portability and strength; automatic warning buzzer to signal end of belt; control lights; ultra-sensitive sound pickup for conference use; pin-point index control. All this and more, ready to use for only **$199.50** *plus tax . . .*
Full line of accessories available.

send coupon today for

5-DAY FREE TRIAL IN THE PRIVACY OF YOUR OFFICE

To: Stenocord of America, Inc. or
29 Broadway
New York 6, N.Y.
(Tel: BO-9-1480)

Pacific Instruments Corp.
940 N. Fairfax Ave.
Los Angeles 46, Calif.
(Tel: OL-6-0020)

YES! I want proof of how STENOCORD will save me more time and money.

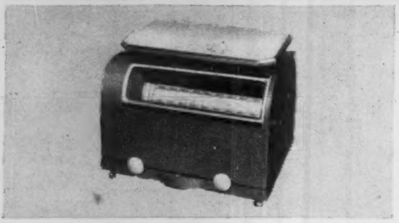
☐ *Phone to arrange FREE 5-day trial in my office*
☐ *Send FREE literature only*

*Name*__________
*Address*__________
*City*______ *Zone*______ *State*______

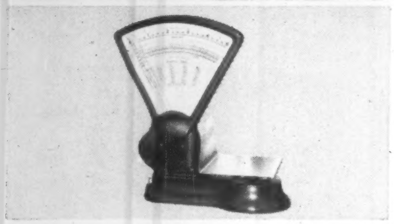
30-A

PARCEL POST RATES UP AVERAGE OF 17% TO NEW HIGH

Every Overage in Air Mail Already Costs at Least 7c;
Every Overage in First Class at Least 4c



Model 3659 Toledo Mailing Scale computes surface and air parcel post to all zones, 1 lb. to 70 lb.



Model 419 Toledo computes postage (air and all classes); parcel post, all zones (surface and air). Charts - 3 lb. or 5 lb.

Know Your Postage is Right with a TOLEDO Scale

Let new Toledo Mailing and Parcel Post Scales compute correct postage *automatically!* Avoid *excess* postage that inflates your costs . . . *under* postage that can damage your valuable customer goodwill. Errors either way are costly, so why take chances with inadequate or obsolete equipment? Look to Toledo for the biggest choice of models with charts especially designed for greatest reading ease . . . get Toledo dependability all the way.

Write for Bulletin 3048 . . . TOLEDO SCALE
DIVISION OF TOLEDO SCALE CORPORATION, TOLEDO 12, OHIO
Toledo Scale Co. of Canada, Ltd., Windsor, Ontario

TOLEDO® *Headquarters for Scales*

Universal KEYTRONIC Sorting Machines

Bring Automation To Volume Sorting

These machines are precision built to sort original forms instantly and accurately. Six models available to handle forms from 2¾ to 11½ inches in width and up to 12 inches in length. Present users report as much as 75 per cent savings of cost and time over manual methods.

If you will furnish information concerning your requirements—methods of sorting, volume, etc., Universal will gladly evaluate your requirements and make recommendations accordingly.

Economy Plus Quality

Speed

Versatility

Simplicity of Operation

UNIVERSAL BUSINESS MACHINES, INC.
P. O. Box 5183
Columbia, South Carolina
Telephone: SUnset 7-4000

Catching Design Pirates

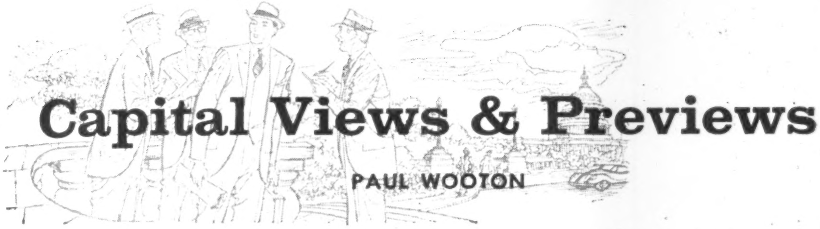
When it comes to punishing commercial design piracy, patent laws are slow, cumbersome, expensive, and, in a nutshell, uncertain. And until now, copyright laws weren't of much help when it came to fabric designs. But recent decisions seem to support copyrighting of fabrics and make-do methods of marking them with copyright notice. Judges have become critical of clever artists who stealthily steal designs by artful changes and are leaning over backward to punish their employers.

All of this has revived company interest in copyright protection. Curtain, table cloth, drapery, upholstery, lace, carpet, and dress goods manufacturers are showing the most interest, but other products may be squeezed within the bounds of protection. It's certainly worth checking.

Copyrights cost between $4 and $6 and, aside from marking the products properly, there's hardly more to do. Look at these attractive advantages: Infringers can be stopped with a temporary injunction and be assessed with lost profits and your lawyers' fees (if reasonable). They can be forced to deliver up their infringing products for destruction. And if the infringing items are imported, you can compel customs officials to bar them at the ports of entry. What more can you ask?

What's In a Name?

Consistency may be the hobgoblin of lesser men, but when it comes to signing company checks, prudence says be consistent. When a certain corporation opened a commercial checking account, like many others, it filed a resolution with the bank which stated that the signature of both the president and treasurer would be required on all checks and notes. But in practice, only one of the officers signed these documents, and the bank put them through. This went on for a while without trouble. But one day, the treasurer signed a check without corporate authorization, the bank paid it out, and the corporation tried to hold the bank liable. The court agreed that the two-signature resolution was part of the contract between the bank and the depositor, but since the corporation had been breaking the rules all along, the corporation wasn't able to hold the bank liable. END



Capital Views & Previews

PAUL WOOTON

A warning from Sen. Harry F. Byrd: Federal spending must be curbed

LIKE Belshazzar, Sen. Harry F. Byrd sees the handwriting on the wall. The ominous warning which concerns the Southern conservative is this country's trillion-dollar public and private indebtedness.

"It is well to learn caution from the experience of others," says the Virginia Democrat. "In our time, we have witnessed the devastating experience of Germany, France, and other nations as a result of their departure from sound financial policies. A welfare state is a subterfuge for good government. It has brought to grief every nation in all history that has tried it."

"Preservation of fiscal soundness is not easy," Byrd concedes, "but the present situation cries out for the elimination of every postponable expenditure so that a substantial start can be made toward reducing the national debt. Such a course would be followed if it became apparent that it is the wish of the people. Business and professional men have a heavy responsibility in that connection. They are leaders in their communities and should be able to arouse the citizens to assert their influence. Congress will be quick to cut appropriations if it becomes apparent that the people want it done."

It was Byrd who sponsored the legislation that gave increased flexibility in the management of the public debt. It was this bill which postponed, for tax purposes, the recognition of capital gains and losses on the exchange of outstanding Treasury securities for new issues. Such advance refunding creates a minimum of market disturbance. It is recognized as an effective way of extending the maturity of the debt.

Sen. Harry F. Byrd

Some of the legislators who have been complaining loudest about high interest rates, Byrd points out, fail to mention that Congress is the principal offender. Had Congress removed the 4¼ per cent ceiling on the interest rate for long-term bonds, Senator Byrd says, the Government would not have been forced to do its borrowing on a short-term basis. In forcing the Treasury to do its refunding in the short-term market, he believes, a great disservice was done small business and those who need short-term money.

Senator Byrd, who is chairman of the Senate Finance Committee, has long been a crusader for reduced Federal expenditures and for the more economical use of appropriations. He feels that the country has been more generous to veterans than it can afford, and he looks with concern on the progressive liberalization of Social Security.

Foreign aid expenditures particularly arouse the Senator's ire.

"Through the fiscal year to end

new
McClure
PICTUREPHONE
PORTABLE SOUND
SLIDEFILM
PROJECTOR

Ideal for Salesmen's Use

ONLY 13 LBS.

Simple to use

33⅓ • 45 • 78 RPM
Up to 18 Minutes per Side

AUTOMATIC FILM FEED AND REWIND

SELF-CONTAINED SCREEN ... NO NEED TO DARKEN THE ROOM

Can Also Be Used On Conventional Screen

HI-FIDELITY SOUND

LOW PRICE

WRITE TODAY!

McC

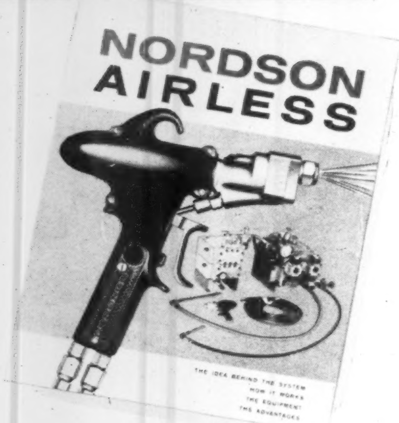
McCLURE PROJECTORS, INC.
P. O. Box 236-D
1122 Central Ave., Wilmette, Illinois
Gentlemen: Please send complete information and prices.

Name__________
Firm Name__________
Address__________
City______ Zone____ State____

if you spend more than $100 per week for paint or other coatings, you should

find out about . . .

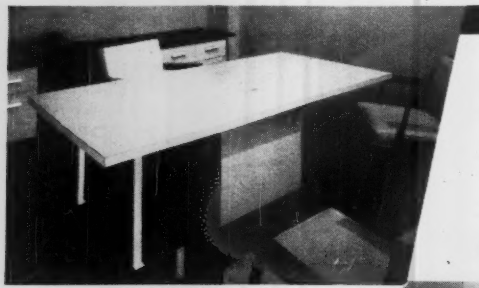
NORDSON HOT AIRLESS SPRAY PAINTING



The Nordson Hot Airless System can save you up to 30% on paint or other coating materials and on labor too! Less expensive spray booths and exhaust systems are needed. Clean up and housekeeping costs are reduced and at the same time finishing quality is improved.

Find out how Nordson Hot Airless can pay off for you, in savings and in improved quality. Write today!

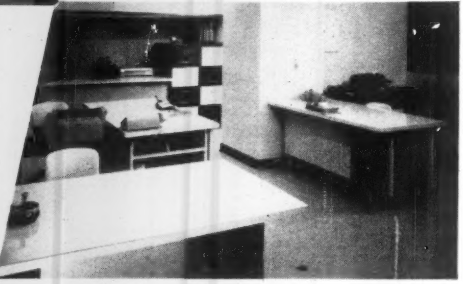
NORDSON CORPORATION
29 Jackson St., Amherst, Ohio



Distinguished

ENOUGH FOR

EXECUTIVE SURROUNDINGS



Economical

ENOUGH FOR

DEPARTMENTAL AND SECRETARIAL OFFICES

H-O-N "MILLION LINE" DESKS AND CREDENZAS have colorful, textured vinyl clad drawer fronts and panels. These units possess modular versatility for varied purposes and arrangements. H-O-N desks add dignity to the executive office, yet at the same time the moderate prices make them economically desirable for departmental and secretarial office uses. See your regular office equipment dealer today, or write to: **The H-O-N Co., Muscatine, Iowa.**

H-O-N OFFICE EQUIPMENT

THE H-O-N CO., MUSCATINE, IOWA

June 30, the United States will have spent $73 billion in foreign aid since the end of World War II. That does not include the cost of the Korean war. It does not include our military expenditures abroad or our expenditures for NATO and other organizations for protection of the Free World. All of this foreign aid expenditure has been added to the public debt for future generations to pay."

To date, the Senator points out, most of our so-called foreign aid has gone to what may generally be regarded as developed nations. The emphasis is now being shifted to underdeveloped and less-developed nations. These nations in the Free World contain more than a billion people, and their needs for money are unlimited.

"Obviously, there is a limit beyond which the American taxpayer cannot be taken," Senator Byrd declares. "There are already areas where taxation is reaching the point of diminishing returns. Our Federal debt is nearly $300 billion.

"Our balance of payments with foreign countries has been in serious decline. Our gold reserves have been dwindling. If the strength and integrity of the American dollar is not maintained, we shall not meet our commitments at home or abroad."

Growth and taxes

The present level of taxation is a menace to the economic growth of the United States, Byrd warns.

"It would help ease our balance of payments difficulties if our prices were competitive with those of producers abroad. Our purchases abroad, foreign investments, and aid are some $20 billion more than we have earned overseas through export of goods and services. A fourth of our merchandise exports are agricultural products. One-third of those exports are being paid for in soft currencies. Many of our products have been priced out of foreign trade. Confidence in the American dollar must be maintained."

The Government must, Byrd insists, stop non-essential and postponable spending, cease profligate spending which has strained our financial position, reduce the debt, and lighten the burden being piled on the next generation if we are to "protect the fundamentals on which our form of government and our enterprise system are founded." END

for
direct process
(spirit) masters…
for
offset
masters…
for
facsimile
copying…
for
laminating…

The all-new DITTO®

MASTERFAX™

does 4 jobs in 1!

1 **MAKES SPIRIT MASTERS IN 15 SECONDS,** without a typing carbon, from original copy on Masterfax paper—also from newspapers, letters, business forms. Eliminates retyping, rewriting, redrawing.

2 **MAKES OFFSET MASTERS** from image on Masterfax paper for high quality, long runs. Original remains unchanged—use it many times. Use any grade and size offset mat. Makes masters in about 15 seconds.

3 **MAKES LOW-COST FACSIMILES** from any original: newspaper clipping, letterhead, business form. Also, from image on Masterfax paper, makes copies on any weight, grade of paper—even cloth!

4 **PLUS FEATURE—IT LAMINATES!** Covers papers, documents with tough, plastic coating. Protects against dirt, age, handling. Enhances appearance of papers. Costs only pennies!

FOR FULL DETAILS AND DEMONSTRATION call your local DITTO Sales Representative, or mail coupon.

1910 1960 50 Ditto

Ditto

For fifty years the helping hand for modern business

DITTO, INC., | *6800 McCormick Rd., Chicago 45, Ill.*

Gentlemen: Without obligation, please—

☐ Send me full particulars on the amazing new DITTO MASTERFAX.

☐ Have your Sales Representative arrange a demonstration.

NAME, TITLE____________________

COMPANY____________________

ADDRESS____________________

CITY__________ZONE____STATE________

The current Panel report,
"What Industry's Leaders Think of ADVERTISING,"
appears on page 38

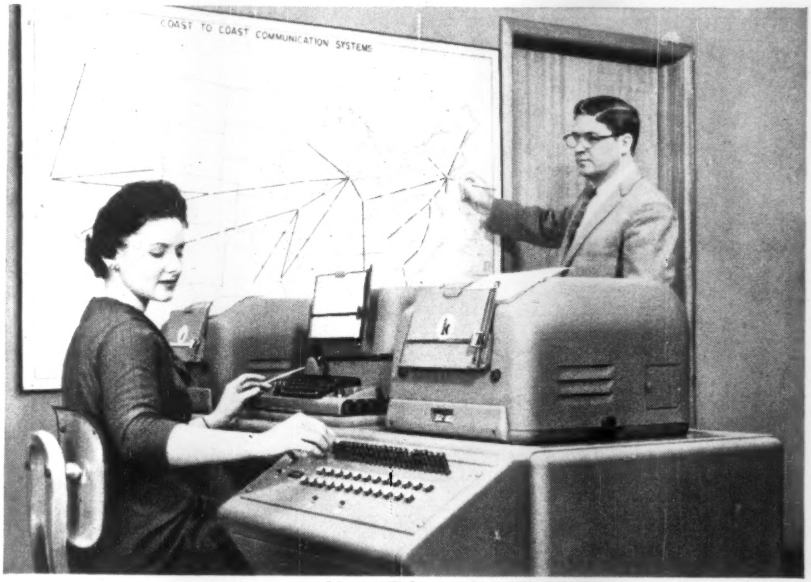
Members of THE PRESIDENTS' PANEL

- G. T. AVERY
  - Acme Steel Company
- PETER F. HURST
  - Aeroquip Corp.
- JOHN A. HILL
  - Air Reduction Company, Inc.
- EDWARD J. HANLEY
  - Allegheny Ludlum Steel Corp.
- ROBERT S. STEVENSON
  - Allis-Chalmers Manufacturing Company, Inc.
- CHARLES W. PERELLE
  - American Bosch Arma Corp.
- W. G. MALCOLM
  - American Cyanamid Company
- E. WELDON SCHUMACHER
  - American Optical Company
- JOSEPH A. GRAZIER
  - American Radiator & Standard Sanitary Corp.
- PAUL M. HAHN
  - The American Tobacco Company
- GERALD S. TOMPKINS
  - American Viscose Corp.
- HOWARD I. YOUNG
  - American Zinc, Lead & Smelting Company, Inc.
- ROLAND V. RODMAN
  - Anderson-Prichard Oil Corp.
- JOHN H. DANIELS
  - Archer-Daniels-Midland Company
- J. FRANK HOLT
  - Arden Farms Company, Inc.
- CLIFFORD J. BACKSTRAND
  - Armstrong Cork Company
- GLENN W. THOMPSON
  - Arvin Industries, Inc.
- CARLYLE F. BARNES
  - Associated Spring Corp.
- RALPH K. GOTTSHALL
  - Atlas Powder Company
- WILLIAM W. McQUILKIN
  - Bausch & Lomb Optical Company
- LESTON P. FANEUF
  - Bell Aircraft Corp.
- MALCOLM P. FERGUSON
  - Bendix Aviation Corp.
- ROBERT TRAIN
  - Bibb Manufacturing Company, Inc.
- AXEL H. ANDERSON
  - Bird & Son, Inc.
- W. CORDES SNYDER, JR.
  - Blaw-Knox Company
- ROBERT POTTER
  - E. W. Bliss Company, Inc.
- AUSTIN R. ZENDER
  - Bridgeport Brass Company
- FREDERICK N. SCHWARTZ
  - Bristol-Myers Company
- B. EDWARD BENSINGER
  - The Brunswick-Balke-Collender Company
- RAY R. EPPERT
  - Burroughs Corp.
- HORACE Y. BASSETT
  - Calumet & Hecla, Inc.
- ROY W. MOORE, JR.
  - Canada Dry Corp.
- CLINTON F. ROBINSON
  - Carborundum Company
- NED A. OCHILTREE
  - Ceco Steel Products Corp.
- FRED H. PILLSBURY
  - Century Electric Company
- MALCOLM MEYER
  - Certain-Teed Products Corp.
- O. WILLIAM CARPENTER
  - Chain Belt Company
- CHARLES J. HAINES
  - Chemetron Corp.
- G. J. COFFEY
  - Chicago Pneumatic Tool Company
- WALTER A. STERLING
  - Cleveland-Cliffs Iron Company, Inc.
- LYLE L. SHEPARD
  - Columbian Carbon Company
- H. G. EBDON
  - Combustion Engineering, Inc.
- FREDERICK H. COOK
  - Congoleum-Nairn, Inc.
- HOWARD A. COWDEN
  - Consumers Cooperative Association
- MORTIMER S. GORDON
  - Continental Copper & Steel Industries, Inc.
- CLARENCE REESE
  - Continental Motors Corp.
- L. F. McCOLLUM
  - Continental Oil Company
- E. L. MILLER
  - Cooper-Bessemer Corp.
- WILLIAM T. BRADY
  - Corn Products Company
- JOHN E. MARTIN
  - Dana Corp.
- THOMAS ROY JONES
  - Daystrom, Inc.
- C. M. CHRISTIE
  - Dayton Rubber Company, Inc.
- JAMES L. SEWELL
  - Delhi-Taylor Oil Corp.
- SCOTT HARROD
  - Ditto, Inc.
- T. SPENCER SHORE
  - The Eagle-Picher Company
- JAMES G. SHENNAN
  - Elgin National Watch Company
- BENJAMIN ABRAMS
  - Emerson Radio & Phonograph Corp.
- WILLIAM H. RUFFIN
  - Erwin Mills, Inc.
- EDWARD S. EVANS, JR.
  - Evans Products Company
- H. GLENN BIXBY
  - Ex-Cello-O Corp.
- E. D. EDQUIST
  - Fairmont Foods Company, Inc.
- JOSEPH E. GRIESEDIECK
  - Falstaff Brewing Corp.
- SALVATORE GIORDANO
  - Fedders Corp.
- GUY S. PEPPIATT
  - Federal-Mogul-Bower Bearings, Inc.
- H. D. PALMER
  - Fenestra, Inc.
- HENRY T. MARKS
  - Ferro Corp.
- J. M. FERGUSON, JR.
  - Flour Mills of America, Inc.
- ERNEST HART
  - Food Machinery & Chemical Corp.
- W. P. FULLER BRAWNER
  - W. P. Fuller & Company
- WILLIAM J. STEBLER
  - General American Transportation Corp.
- ROBERT PAXTON
  - General Electric Company
- ROBERT B. PAMPLIN
  - Georgia-Pacific Corp.
- RALPH J. KRAUT
  - Giddings & Lewis Machine Tool Company
- A. C. GILBERT, JR.
  - The A. C. Gilbert Company
- HARRY W. BRADBURY
  - Glen Alden Corp.
- CHESTER O. WANVIG, JR.
  - Globe-Union, Inc.
- J. W. KEENER
  - The B. F. Goodrich Company
- J. PETER GRACE
  - W. R. Grace & Company
- SAMUEL H. SWINT
  - Graniteville Company, Inc.
- JUDSON C. TRAVIS
  - Handy & Harman
- HENRY HARNISCHFEGER
  - Harnischfeger Corp.
- J. T. SIMPSON
  - Harsco Corp.
- CHARLES S. PARKE
  - Harshaw Chemical Company, Inc.
- ALFRED J. MARROW
  - Harwood Manufacturing Corp.
- FRANK ARMOUR, JR.
  - H. J. Heinz Company
- SAMUEL F. HINKLE
  - Hershey Chocolate Corp.
- CRIS DOBBINS
  - Ideal Cement Company, Inc.
- HERBERT B. WOODMAN
  - Interchemical Corp.
- H. H. LUNING
  - International Packers, Ltd.
- HAROLD S. GENEEN
  - International Telephone & Telegraph Corp.
- JOHN R. DOW
  - Interstate Bakeries Corp.
- RAYMOND E. SALVATI
  - Island Creek Coal Company
- W. L. WEARLY
  - Joy Manufacturing Company
- STEELE L. WINTERER
  - A. & M. Karagheusian, Inc.
- RICHARD R. HIGGINS
  - The Kendall Company
- DEAN A. McGEE
  - Kerr McKee Oil Industries, Inc.
- JULIEN R. STEELMAN
  - Koehring Company
- FRED C. FOY
  - Koppers Company, Inc.
- GEORGE S. CASE, JR.
  - The Lamson & Sessions Company
- I. MELVILLE STEIN
  - Leeds & Northrup Company
- JOSEPH S. YOUNG
  - Lehigh Portland Cement Company
- EDWARD PLAUT
  - Lehn & Fink Products Corp.
- ROBERT C. BECHERER
  - Link-Belt Company
- E. B. GERMANY
  - Lone Star Steel Company
- EVERETT C. DRAKE
  - M. Lowenstein & Sons, Inc.
- FRANK FREIMANN
  - Magnavox Company
- JAMES H. HOFFMAN
  - The Mansfield Tire & Rubber Company
- OSCAR G. MAYER, JR.
  - Oscar Mayer & Company
- MAX McGRAW
  - McGraw-Edison Company
- DONALD F. MORRIS
  - The Mead Corp.
- JOHN T. CONNOR
  - Merck & Co., Inc.
- J. A. KELLER
  - Mergenthaler Linotype Company
- H. E. MARTIN
  - Metal & Thermit Corp.
- WADE N. HARRIS
  - The Midland-Ross Corp.
- ROBERT C. CORLETT
  - Miehle-Goss-Dexter, Inc.
- P. B. WISHART
  - Minneapolis-Honeywell Regulator Co.
- J. RUSSELL DUNCAN
  - Minneapolis-Moline Company
- ROBERT FAEGRE
  - Minnesota & Ontario Paper Company
- JOHN M. FOX
  - Minute Maid Corp.
- HERBERT L. SHUTTLEWORTH II
  - Mohasco Industries, Inc.
- FRED R. SULLIVAN
  - Monroe Calculating Machine Company
- M. F. COTES
  - Motor Wheel Corp.
- FRED L. RIGGIN, SR.
  - Mueller Brass Company, Inc.
- BYRON C. GOULD
  - Murray Corporation of America
- GEORGE H. COPPERS
  - National Biscuit Company
- ROBERT S. OELMAN
  - The National Cash Register Company
- THEODORE B. FOCKE
  - National-U. S. Radiator Corp.
- W. MARTIN DILLON
  - Northwestern Steel & Wire Company
- CARL L. HECKER
  - Oliver Corp.
- CARL R. MEGOWEN
  - Owens-Illinois Glass Company
- BERNARD T. ROCCA, JR.
  - Pacific Vegetable Oil Corp.
- MERL C. KELCE
  - Peabody Coal Company

WILLIAM P. DRAKE
Pennsalt Chemicals Corp.
BRACKETT PARSONS
Pepperell Manufacturing Company
WILLIAM B. PROSSER
Perfect Circle Corp.
JAMES M. SKINNER, JR.
Philco Corp.
PAUL ENDACOTT
Phillips Petroleum Company
PAUL S. GEROT
The Pillsbury Company
C. L. HOLBERT
H. K. Porter Company, Inc.
JOHN W. SCALLAN
Pullman-Standard Car Manufacturing Company
MUNDY I. PEALE
Republic Aviation Corp.
F. G. CARTER
R. J. Reynolds Tobacco Company
CHARLES H. JONES
Richfield Oil Corp.
THOMAS T. ARDEN
Robertshaw-Fulton Controls Company
WILLARD F. ROCKWELL, JR.
Rockwell Manufacturing Company
A. D. ROSS FRASER
Rome Cable Corp.
PHILIP M. ZENNER
Royal McBee Corp.
E. J. O'LEARY
The Ruberoid Company
WILLIAM R. ADAMS
St. Regis Paper Company, Inc.
FRANCIS C. BROWN
Schering Corp.
LAURENCE E. MALLINCKRODT
Scruggs-Vandervoort-Barney, Inc.
EDGAR M. BRONFMAN
Joseph E. Seagram & Sons, Inc.
A. M. TREDWELL, JR.
Sharon Steel Corp.
EDWIN R. BRODEN
SKF Industries, Inc.
W. A. MUNNS
Smith, Kline & French Laboratories
HERBERT KUNZEL
Solar Aircraft Company, Inc.
MILFERD A. SPAYD
Standard Register Company
CATHERINE L. O'BRIEN
Stanley Home Products, Inc.
HANS STAUFFER
Stauffer Chemical Company
CHARLES H. SMITH, JR.
The Steel Improvement & Forge Company
RICHARD J. STOCKHAM
Stockham Valves & Fittings, Inc.
HENRY M. HEYN
Surface Combustion Corp.
ROBERT McCULLOCH
Temco Aircraft Corp.
DEAN E. WOOLDRIDGE
Thompson Ramo Wooldridge, Inc.
FRANK E. BEANE
Underwood Corp.
HAROLD ROTH
United States Hoffman Machinery Corp.
CLAUDE S. LAWSON
United States Pipe & Foundry Company
CHARLES W. IRELAND
Vulcan Materials Company
REA I. HAHN
Walker Manufacturing Company, of Wisconsin
GEORGE OLMSTED, JR.
S. D. Warren Company, Inc.
ROBERT E. BROOKER
Whirlpool Corp.
HARLESTON R. WOOD
Alan Wood Steel Company
WALTHER H. FELDMANN
Worthington Corp.
ROBERT B. SEMPLE
Wyandotte Chemicals Corp.
GILBERT W. CHAPMAN
The Yale & Towne Manufacturing Company, Inc.

Now Kleinschmidt will engineer a new inter-plant telecommunications system to fit your specific business needs

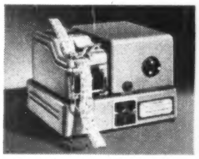
-AND LEASE IT TO YOU AT LOWER COST!

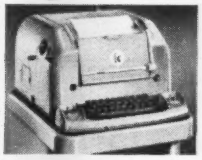


New "Teleswitcher-B" Master Traffic Control Unit

Kleinschmidt offers three important advantages never before available to users of inter-plant telecommunications: 1—Kleinschmidt engineers will make a comprehensive evaluation of your present and future communications requirements and design a new, more efficient system to fit them. 2—Kleinschmidt will install new equipment and provide complete service and maintenance—all incorporated in the lease price. 3—As an experienced basic manufacturer of equipment . . . from standard page printers to automatic switching systems . . . Kleinschmidt leases *direct to user*, effecting *substantial savings* over present common carrier rates! Call or write, now, for full details.

Typing Reperforator
Perforates, transmits, receives in tape form.


Tele-Transmitter
Transmits from the data stored on punched tape.


Teleprinter
Sends, receives copy in continuous page form.

SCM KLEINSCHMIDT
DATA PROCESSING SYSTEMS DIVISION
SMITH-CORONA MARCHANT INC.
Lake-Cook Road, Deerfield, Illinois

International Markets

ALEXANDER O. STANLEY

» *Hope of tax relief for U.S. international companies is revived as Boggs Bill clears committee.*

» *Merger of twenty nations into a new Atlantic Economic Community is proposed as a trade and aid booster.*

» *Congressional battle looms over bill which would tie import levies to foreign wage rates.*

Tax Holiday Proposed

Tax relief for internationally operated U.S. companies became a brighter prospect when the House Ways and Means Committee recently patched up its differences and prepared the Boggs Bill for Congressional consideration.

Since it was introduced just over a year ago, the Boggs Bill—which provides a tax holiday on overseas earnings of U.S. companies as long as the earnings are retained abroad—has been subjected to some rough handling by the Administration and the Treasury Department. Although accepting in principle the need for some type of inducement to encourage deployment of U.S. private capital in overseas areas to support our fight for world markets, the President and the Treasury view with alarm the prospect of stepping up the heavy outflow of U.S. dollars and swelling the fat deficit—$4 billion in 1959—in our international balance of payments. The Administration proposed as a compromise that the tax deferral privilege of "foreign business corporations" be limited to operations in the underdeveloped countries. But this proposal has been rejected by the House Committee by a vote of thirteen to six.

As it is now conceived by its architects, the Boggs Bill would permit American companies to:

- organize a new type of foreign subsidiary in the United States to handle the American parent company's overseas business
- elect to defer U.S. taxes on overseas earnings that are retained abroad and not paid out in dividends to the U.S. parent.

This type of tax deferral is already authorized under existing law for U.S. subsidiaries that are incorporated in foreign countries. The elective feature is an important one. It would allow the U.S. parent company to hold off importing its overseas earnings in the fat years and tap its overseas surplus in the lean years.

The House Committee has written in a tight control to offset fears that American companies could adopt the foreign business corporation classification in order to produce their goods overseas with cheap labor and cheap materials for export at cheap prices to the U.S. market and thus cause a loss of jobs to U.S. labor and loss of markets to less sophisticated U.S. businesses.

To qualify for the tax deferral benefits, 90 per cent (and it was originally 85 per cent) of the foreign business corporation's income must be derived from *foreign* sources.

The Committee, in an effort to close loopholes to potential tax evasions, has also spelled out the type of income covered. It must be from the active conduct of trade or business, from dividends, from a limited amount of royalties, from technical and managerial services, or from a combination of these forms of revenue.

Chances are that as it passes through the Congressional mill, some parts of the Boggs Bill will be chipped away and some new elements injected. But in whatever form it finally emerges, this bill will have an impact on your overseas operations.

As a partial substitute for foreign aid and as a boost for U.S. companies who need help to fend off the competitive pressures of common markets and the Communist bloc, the Boggs Bill switches the emphasis from Government subsidy to Government support of free enterprise in world markets.

Atlantic Trade Combine

Alarmed at signs of full-scale economic warfare between the European Economic Community and the European Free Trade Association headed by England, the United States has proposed a new Atlantic Economic Community. The purpose: to link twenty nations into a combine for general economic cooperation and establish lines of collaboration in aid to the underdeveloped countries of the world.

Although formation of this new body economic is still a year or so off, an interim group is being created to wrestle with the problems arising from the division of Europe into two tariff-cutting groups.

Initial members of the new AEC will be the United States, Canada, the EEC countries (France, West

Germany, Italy, the Netherlands, Belgium and Luxembourg), the EFTA countries (Britain, Norway, Sweden, Denmark, Austria, Switzerland, and Portugal), and the balance of the uncommitted original OEEC countries —Greece, Iceland, Ireland, Trieste, and Turkey. Eventually it is hoped the AEC will include Japan, India, Brazil, and representatives from the Far East, Asia, the Middle East, and Africa as members or partieipants.

Preliminary work on the AEC charter is to be delegated to a group of "wise men," possibly three in number, one each representing the EEC and the EFTA and one from outside these two groups. This group is expected to release an interim report within the next month or so. The hope is that a bridge can be formed between the two common market blocs before the July 1 deadline, when tariff-cutting provisions of the two pacts go into full effect.

Included on the AEC agenda is a discussion of aid to underdeveloped countries. The immediate objective is an interchange of information rather than coordination of practice, so that the countries which are in the business of exporting capital can examine existing techniques, problems, and potentialities for industrial aid expansion to the underdeveloped countries.

So far, the AEC project has been well received by most of the countries involved. Reginald Maudling, president of the British Board of Trade, forecasts a large expansion in two-way transatlantic trade. But Jean Claude Pettit, U.S. Commercial Counselor for the French Embassy, is less optimistic. He believes unresolved differences in principle between the two European blocs make a compromise highly improbable at this time.

If not the extent, at least the intent of the European market blocs to resolve their differences should become clear in the next few months. Their treatment of the proposed AEC will provide a clue to future cooperation or confusion in world markets.

Import Barriers Loom

The battle over U.S. import policies seems headed for a showdown in 1960. Spearheading the attack on foreign imports (which hit a peak $15.3 billion in 1959) is a new bill authored by Sen. Kenneth R. Keat-

"Thermo-Fax"
COPYING MACHINES
give you dry copies
4 seconds FAST

You're hurrying to get to that meeting . . . suddenly you need extra copies. That's no problem with a "Thermo-Fax" Copying Machine in your office. In just seconds you have dry copies in your brief case.

Using no chemicals these machines turn out a perfectly dry, clean copy in just 4 seconds—electrically. And copies can be made on white, bond-weight paper—or on any of 6 other distinctive colors.

"Thermo-Fax" Copying Machines copy just about everything, quickly and easily. Such routines as billing, accounting and addressing are speeded. To see one of these time-savers at work, call your dealer now. Or mail the coupon.

Only "Thermo-Fax" Copying Machines do so many jobs...so quickly, so easily, for such low cost!

"Machines that mean business"

Thermo-Fax COPYING PRODUCTS
3M COMPANY

THE TERM "THERMO-FAX" IS A REGISTERED TRADEMARK OF MINNESOTA MINING AND MANUFACTURING COMPANY

Minnesota Mining and Manufacturing Company
Dept. DBB-30, St. Paul 6, Minnesota
Name__________
Company__________
Address__________
City__________ Zone____ State____

MINNESOTA MINING AND MANUFACTURING COMPANY
. . . WHERE RESEARCH IS THE KEY TO TOMORROW

NO COSTLY SHELVING NEEDED WITH

CONVOY "Chem-Board"*

RIGID, PERMANENT, INEXPENSIVE

record storage FILES

Chem-Board Storage Files are permanent. They cost and weigh about 50% less than steel; cost less than some corrugated paper files. They're shipped assembled, ready for use.

NOW—smooth, staple-free fronts make them suitable even for "front-office" use.

Available in letter, legal, check, deposit slip, tab card and many other sizes.

*CHEM-BOARD IS RIGIDIZED CORRUGATED BOARD PROCESSED TO REMARKABLE STRENGTH.

CONVOY, Inc.
Station B, Box 216-R
Canton 6, Ohio

TEST YOUR LETTERHEAD

FREE brochure tells you how!

Does your letterhead represent your company effectively?

It costs little or nothing more to buy letterheads that are scientifically designed to build prestige, create a favorable impression of your company and promote its sales.

This helpful brochure shows you how to test your letterhead and rate its effectiveness . . . . how to overcome its faults. *If you use 5,000 or more letterheads a year we'll be glad to send you a copy. Here's what to do:*

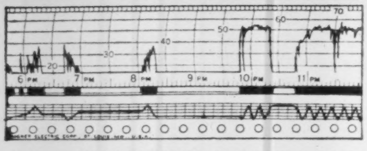
1. **Write on your letterhead how many you use a year.**
2. **Send us your letterhead.**

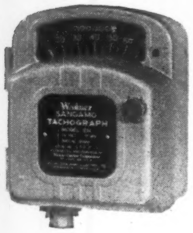
Absolutely no obligation. Write for free copy today.

Dept. D-29

R.O.H. HILL, INC.
270 Lafayette Street, New York 12, N.Y.
Quality business cards & letterheads since 1914

NEW 31-DAY "STRIP" CHART
helps truck owners cut operating costs



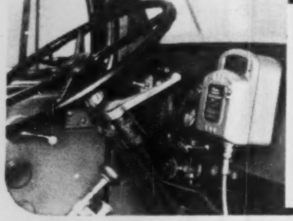


New WAGNER-SANGAMO

TACHOGRAPH

graphically records truck operations —up to 31 days—on single chart

This tamper-proof instrument provides a permanent graphic report of every run of each Tachograph-equipped truck. Recorded time of operation, duration of stops, speeds, and distances traveled give you valuable information . . . help you plan better routing, control speed, cut wasted time, and reduce truck operating costs. For details, mail the coupon.



Wagner Electric Corporation
6439 PLYMOUTH AVE., ST. LOUIS 33, MO., U.S.A.
Send FREE copy of Bulletin SU-140.
Name__________
Company__________
Address__________
City & State__________
We operate__________vehicles.
WS60-4

ing (R., N.Y.): Dropped quietly into the Congressional hopper late in 1959, the Keating Bill (S.2663) is bound to create a furor when it comes up for Congressional attention.

The bill proposes a new switch in protectionist policy: to link duties on foreign-made products to foreign rates of pay, imposing surcharges on low-cost goods in order to "equalize conditions of competition between domestic and foreign industries with respect to the level of wages and working conditions in the production of articles imported into the United States." The bill, which was instigated and backed by labor unions representing largely textile and other manufacturing industries currently hurting from foreign competition, has a strong vote-getting appeal.

Coming at a time when the Government has won a signal victory in persuading the free world to abandon practices of trade discrimination and is busily trying to stop tariff bickerings between the two European market blocs, the Keating Bill is, to say the least, a bitter pill for the Administration to swallow. For many U.S. international traders, its passage could spell serious trouble. Here are the highlights:

- Procedures would be set up under which special duties could be levied on imports which after investigation were found to have been produced at lower labor costs than those paid in domestic industries. This loose definition affects not only imports that are competitive but also strategic materials that we need badly. In practice, it could be imposed on almost all our imports.
- Authority to carry out investigations into costs and to decide which products may or may not enter the United States would be vested in the Secretary of Labor, who by indirection would have to become a global referee. And by implication a new type of economic intelligence agency would have to be created to keep tabs on overseas production costs.

Although the avowed purpose of the measure is to bar only imports produced under substandard or "sweat shop" conditions, the built-in administrative latitude could encourage a crackdown on any imported products for real or imagined competitive grievances. Sophisticated international traders don't give the Keating Bill much chance to pass,

DUN'S REVIEW
AND MODERN INDUSTRY
February 1960
Industry Heads for the Open
A DUN & BRADSTREET PUBLICATION

for the right impact on management... advertise in the magazine edited for the age of the manager

DUN'S REVIEW
Special Report to Management
INDUSTRY'S PLANT
Big Changes Ahead

Dominant, continuous advertising to management in DUN'S REVIEW and Modern Industry is the effective . . . selective . . . economical way to influence business decisions. Here your dollars buy frequent, impressive advertising which is read by important executives when they are thinking about business and most responsive to business advertising.

This is the reason advertisers are placing more pages in this business management magazine. They have found it the place to influence the decisions of men who have the authority and interest to act. When you advertise to business your advertising belongs in . . .

DUN'S REVIEW
AND MODERN INDUSTRY

The magazine of Presidents
...and men who are going to be!

ABC

particularly because of its unorthodox features.

Oil and Diamonds

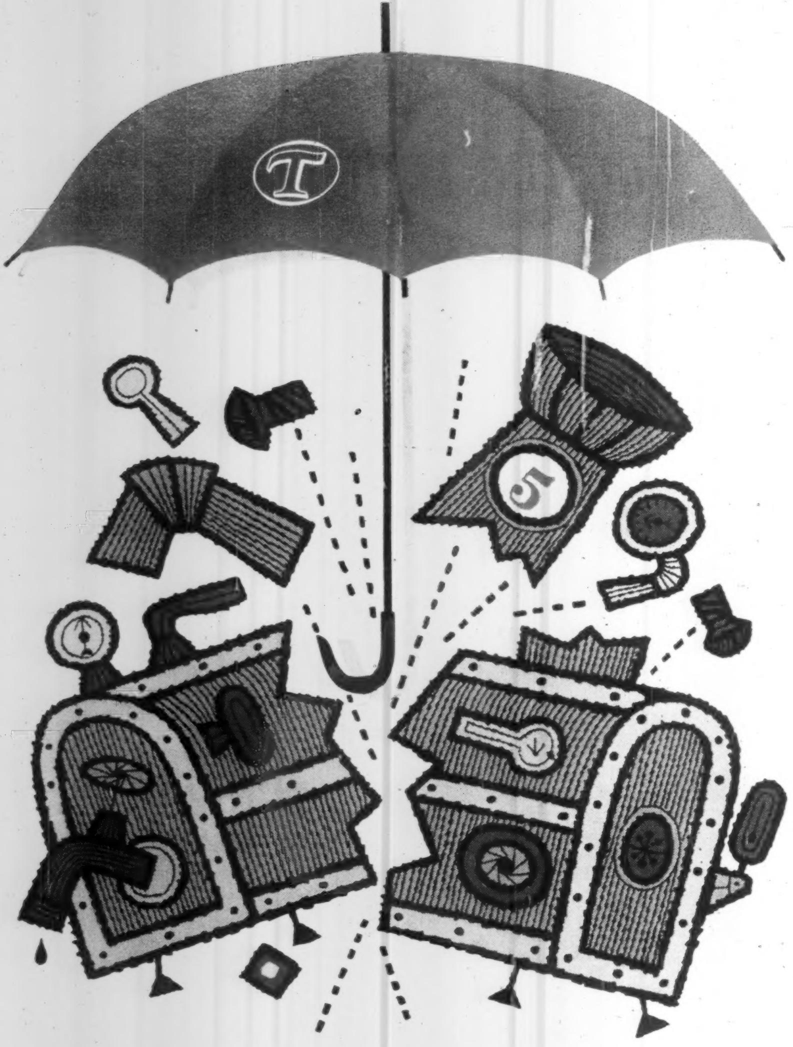
Soviet economic warfare continues to make news. Two recent examples of Soviet penetration in world markets are indicative of the scope and variety of the Red offensive. Japan's first large order for Soviet oil has been signed at prices below prevailing world rates. The six-year contract is for a total of 1.5 million tons, or roughly 10.5 million barrels of Soviet oil. The ultimate Soviet goal in oil sales to Japan is 1 million tons yearly.

Behind this big Soviet sale is a huge expansion program in its oil industry. Excluding satellite production, the Soviet Union is presently producing 2,650,000 barrels a day, up 15 per cent from 1958 levels. Output by 1965 is targeted at 4.8 million barrels daily, a goal generally conceded as attainable. At this rate, Russia will rapidly displace Venezuela as the No. 2 world supplier. The Venezuelan oil yield was 2.7 million barrels daily in 1959, up a modest 3 per cent from 1958 levels.

The second development is that the Soviet Union recently signed a contract in London with the DeBeers Group to market all Soviet diamond exports to the West in whatever quantity it wishes to sell. Although the volume of carats is a tightly guarded secret, it is significant that apparently this is the first time the DeBeers Group, which handles 98 per cent of world diamond sales, has signed with a country instead of individual producers. Since the DeBeers Group works like a market specialist in diamond stocks, controlling the flow of diamonds into world markets at controlled prices, the Soviet stratagem here could be a forcing play. Look for similar moves in other areas and in other commodities.

Banking Incognito

Following the lead of the Swiss banking system, Mexico's Ministry of Finance has announced it will permit bank accounts to be kept in code numbers, with the identity to be known only to the depository. The hope is that this move will encourage Mexican expatriate capital to come home and also that the device will attract even more deposits of foreign currencies, currently placed at $130 million. END



WHAT HAPPENS WHEN NO. 5 BLOWS ITS STACK?

When a critical piece of machinery breaks down, it can knock production for a loop. But this needn't mean loss of profits, or paying overhead on unproductive machinery.

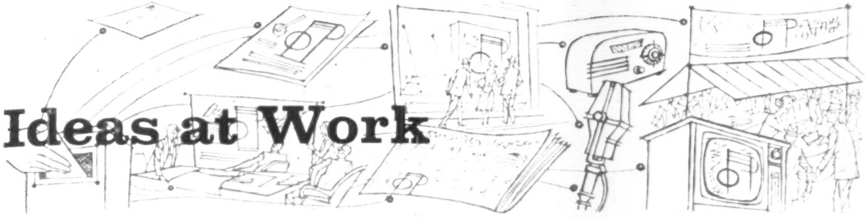
With Travelers Boiler and Machinery insurance you're triple-protected against loss. 1. Travelers safety experts inspect equipment and promote preventive maintenance. 2. Travelers pays for repairs on machinery covered by your policy. 3. Travelers compensates you for loss of profits and overhead during unscheduled production shutdowns.

Your whole plant belongs under The Travelers umbrella! It's the modern way to plan insurance—one source—one man to see. And you can pay for all your Travelers insurance with one monthly check. Talk it over with your Travelers Agent or broker.

"One plan, one man, one monthly check to pay—that's the modern Travelers way!"

THE TRAVELERS
Insurance Companies HARTFORD 15, CONN.

Ideas at Work



- ✓ *Companies unite for political action*
- ✓ *Spanish spoken here*
- ✓ *Television replaces the grapevine*

Cooperative Politics

Often small companies hesitate to participate actively in local politics because they lack the resources, and large companies avoid political activity for fear of being accused of dominating civic affairs.

Now a small company in Rahway, N.J., has come up with a cooperative community effort that seems to answer both objections.

The Metal & Thermit Corp., an affiliate of the American Can Company, set up a seminar course in practical politics and invited representatives of eight other large and small companies in the area to attend. Companies which participated were American Metal Climax, Foster Wheeler, Westvaco Division of Food Machinery and Chemical, American Cyanamid Company, Koppers Company, Purolator Products, Allen Industries, and New Jersey Bell Telephone.

The meetings were held in January at M&T headquarters. The course outlined the basic principles of the major political parties, sketched their history, and detailed ways in which individual citizens can take a more active part in political and governmental affairs. The object was to show the participants how to arrange and conduct similar programs for their own employees.

John Saracino, director of M&T employee relations and administration and originator of the cooperative program, says that his company plans to conduct the seminars at all M&T plants by the end of the year.

Talking Their Language

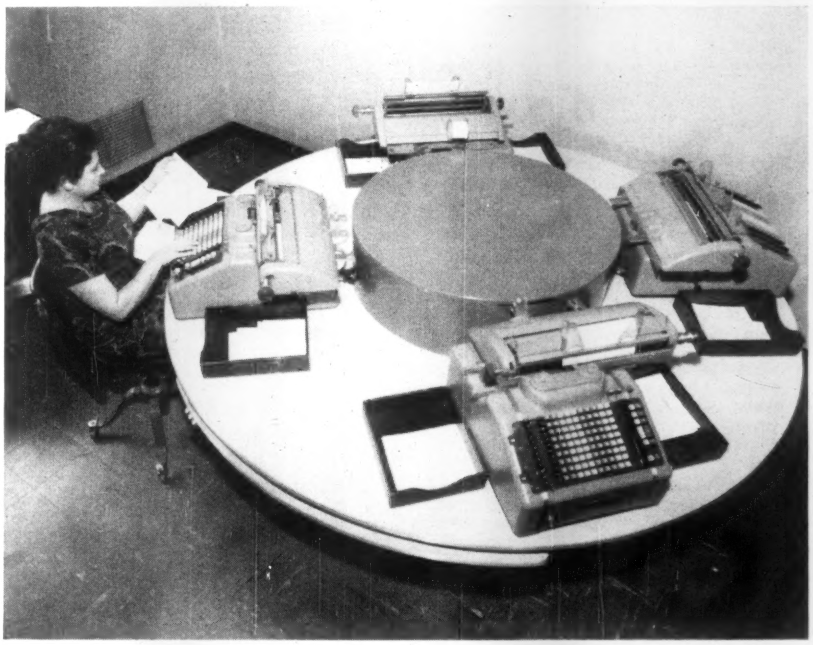
The language barrier is an employee relations problem peculiar to many companies in the Southwest and the highly industrialized cities of the Midwest and East Coast. The postwar influx of Spanish-speaking workers has been welcomed by companies in need of willing, unskilled labor, but it has created difficulties in communicating instructions to the workers and in making them feel accepted.

A little reverse psychology has solved both of these problems at one Eastern plant and could be applicable in other companies which have a large number of non-English-speaking workers.

Instead of trying to teach English to the 200 Puerto Ricans among its 900 employees, the Hatfield Wire and Cable Division of Continental Copper & Steel Industries, Inc., Hillside, N.J., teaches practical Spanish to its foremen and personnel workers.

The students attend classes at the plant twice weekly on their own time. The instructor, a teacher at a nearby college, skips the fine points of grammar and concentrates on teaching the supervisors to identify objects, to pronounce Spanish names correctly, and to speak simple sentences.

Since the unskilled Puerto Rican



EASY DOES IT: *A giant lazy susan enables one operator at a regional accounting office of Universal C.I.T. Credit Corp., Yonkers, N.Y., to do the work of four clerks. While one of the four Burroughs Sensimatic accounting machines is automatically computing the information on a loan schedule, the operator presses a button to bring a second machine in place and keyboards a second loan schedule. She continues until all four machines are operating. The table was designed by assistant treasurer Joseph Kramer.*

DUN'S REVIEW REPRINTS

Reader interest has shown the great value of Dun's Review articles to efficient operations. A limited supply of reprints is now available. Use them for reference copies, distribute them to your department managers. These reprints will prove a valuable tool.

Only 30¢ each!

C-135: Integrating Your Transportation for Profit, *A Special Report to Management.* Industry's third-largest cost—shipping—is thoroughly analyzed to show the latest trends in piggybacking, leasing vs. company trucks, and traffic management. 30¢ each.

C-136: New Ways of Packaging for Profit. An important two-part feature on the newest developments in materials and design for both consumer and industrial wrappings. Case studies and pictures graphically demonstrate successful packaging programs. 30¢ each.

Only 20¢ each!

C-140: The Myth of Communications *by Clarence B. Randall.* The leading elder statesmen of American business—former president of Inland Steel Company—explores "the myths of management," starting with the idea that there's never too much communication. This article has drawn nationwide publicity in newspapers throughout the country. 20¢ each.

C-137: The Practice of Management *by Peter F. Drucker.* A man who knows business and executives thoroughly discusses the changing role of management in the coming decade, outlines the manager's role in 1970. By the author of *America's Next Twenty Years.* 20¢ each.

C-133: Industry's War on Wear *by Melvin Mandell.* Battling machine wear is no longer the exclusive province of the lowly grease monkey. Today, to protect its investments in costlier and more complex production equipment, top management is getting into the maintenance act. Here's how. 20¢ each.

C-138: Undeveloped Gold Mines in Purchasing *by Richard W. Taylor.* Progressive companies are exploiting some effective—though often neglected—ways of reducing procurement costs and taking advantage of the profit potentials in purchasing's contribution to management planning and control. 20¢ each.

C-139: Your Stake in the Materials Revolution. Plastics caused a manufacturing and marketing revolution that hasn't yet stopped. Other new materials promise to do the same. This report spotlights present uses and future applications that can change your company's plans today. 20¢ each.

Send payment with order to:

Readers' Service Department,
DUN'S REVIEW,
99 Church Street, New York 8, N.Y.

workers perform only routine, repetitive tasks, instructions are uncomplicated and easy to translate into elementary Spanish. What makes the words important, even if they are as mundane as "What's your job number?" is that they are spoken in Spanish by a supervisor.

The result has been a steady improvement in worker relations. Says Gordon W. Cunnane, personnel director: "The Puerto Ricans were afraid that if they couldn't understand what was being said to them, it would be held against them, and so they would say 'yes' to everything. Now, because they feel the company is taking an interest in them, they are trying harder to learn English."

Direct Broadcast

A closed-circuit TV system which permits management to speak directly to all of its employees (and lets them talk back) is paying big dividends at the Hallamore Electronics Company of Anaheim, Calif.

Workers can see and hear company messages broadcast over 90 TV receivers spotted throughout the plant without leaving their work stations. If a worker has a question about any topic being discussed, he dials a special operator, who transmits his query to the broadcasting booth.

The master control room handles the inplant broadcasts and can also pick up commercial TV channels. By special arrangement, local stations notify the company of major news developments so that they may be flashed to the workers.

Company telecasts are scheduled during the lunch hour. Among the regular programs are:

- President's report—a 30-minute, once-a-month talk by the company president.
- Fashion show—scheduled every six weeks to keep women workers up to date on the latest styles.
- Service award—presentations and informal interviews with the winners.
- Social notes—daily announcements of employees' anniversaries and birthdays.
- Visitors—a listing of important plant visitors and interviews.
- Political events—candidates are invited to the plant to give their views.

The station also carries special programs and demonstrations on safety, quality control, training, and so on. Hallamore's director of industrial relations, D. M. Snow, says the more important advantage of TV over other communication devices is that it gets management's views across to the workers without distortion. Management credits the system with the fact that the company won a 4 to 1 victory in a recent union representation election. It also thinks that better communications is responsible for the company's low turn-over rate.

Pride of Ownership

A time-honored way to clinch a sale is to allow the customer to try out the product in his own home. The Admiral Corp. has found the same technique works equally well in "selling" its products to its salesmen and executives.

About three years ago, Admiral decided that its distributor salesmen would have a better working knowledge of its merchandise if all of them owned the company's newest model appliances and TV sets and used them in their homes.

All factory branches and distributors established special promotions through which their salesmen could earn credits which could be redeemed in the form of one or more of Admiral's products. Distributors also made these products available to their employees at landed cost.

Results of the campaign were twofold: First, the company found the salesmen learned a great deal more about a TV set or refrigerator by actually using it in his home than by any other method of sales training. Second, Admiral discovered the salesman's wife became a most enthusiastic booster of its merchandise among her neighbors and friends.

At the management level, Admiral has an executive plan whereby an official buys a television receiver or any other product and has it replaced automatically each time a new line is introduced. The official pays just once, but the company sees to it that he always has the latest model in his home.

Says Carl E. Lantz, Admiral's vice president-sales: "This gives the executive an extra special pride of ownership and enables him and his wife to show their friends the newest products as soon as they are available. This, in effect, is one way of improving our top echelon's product knowledge. Indirectly, these men are highly effective salesmen among an influential class of people." —C.K.

EXECUTIVE BOOKSHELF

Brief Reviews of New Business Books

Your Russian Counterpart

THE RED EXECUTIVE *by David Granick. Doubleday & Company, Inc., 575 Madison Ave., New York 22, 334 pages, $4.50*

Meet the competition—the well-trained, well-disciplined, and startlingly recognizable organization men who manage Soviet industry. A well documented first-hand report.

Portrait of a Swindler

THE THIEF IN THE WHITE COLLAR *by Norman Jaspan with Hillel Black. J. B. Lippincott Company, East Washington Square, Philadelphia, 254 pages, $4.95*

Putting the finger on the white-collar crook who robs the till of a billion dollars annually, the author prescribes preventive management as the only cure for the dangerous "moral malignancy" he claims is making us a nation of embezzlers.

What Is a P.R. Man?

THE IMAGE MERCHANTS *by Irwin Ross. Doubleday & Company, Inc., 575 Madison Ave., New York 22, 288 pages, $4.50*

Viewed with the slightly jaundiced eye of a newspaperman who is the natural target for their output, the public relations men who promote people, products, corporations, and governments emerge as inventive practitioners of an art that defies evaluation but gains new devotees every day.

The Policy Planners

BUSINESS COMES OF AGE *by Karl Schriftgiesser. Harper & Brothers, 49 East 33rd St., New York 16, 248 pages, $4.50*

The story of the influential Committee for Economic Development, its business backers, and its impact on U.S. economic policy. Educational, even for business men who profoundly distrust the basic idea of economic planning.

The Human Side

McMURRY'S MANAGEMENT CLINIC *by Robert N. McMurry with Ruth G. Schaeffer and Lawrence E. de Neufville. Simon & Schuster, Inc., 136 West 52nd St., New York, 207 pages, $4.95*

Lively, novel presentation adds appetite appeal to the high-calorie content of this consultant's casebook on the human problems of management.

NOW... a duplicator
anyone
can operate!
Heyer

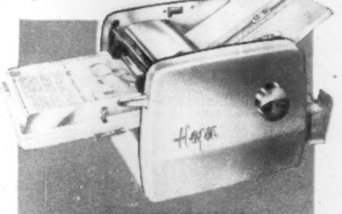
A demonstration will show you the new features that make it easy for anyone to run the HEYER Mark III Conqueror

After a few minutes instruction, anyone can duplicate clear, sharp copies in 1 to 5 colors of anything typed, written or drawn on a spirit master. Now, duplicating is as easy as dialing the telephone and just as fast!

At no increase in price you get such wanted features as a new feed table that eliminates those tricky side rubber adjustments; highly visible re-set counter that saves time and paper; adjustable feed wheels for wrinkle-free, non-skip feeding; and feed tension control for dialing correct tension on all types of papers—from thin papers to post cards—even newsprint.

An example of effortless operation is the automatic start-stop on electric models. The motor clicks off automatically when the last sheet is printed.

And your Heyer Conqueror never becomes obsolete. Parts are available for Heyer Duplicators made many years ago and new advances are designed for adaption on present Conquerors.



COMING SOON!

The new Heyer Conqueror Paper Folder.* Here's a folder you'll be able to load and start—then walk away! It automatically feeds any weight paper, gives all popular folds, 110 sheets a minute. Watch for its introduction.

**Hand-operated model will also be available.*

Conqueror prices begin at just $214.50**. The Electric Mark III Conqueror, shown above, is $299.50**.

***Plus Federal Excise Tax.*

Send for your FREE Personalized Memo Pad—Today!

A demonstration by mail to show what the Conqueror can do for you! No cost . . . no obligation.

Heyer®

"Always Makes a Good Impression"

HEYER INC.
1848B S. Kostner Ave.
Chicago 23, Ill.

☐ Please send my Personalized Memo Pad and Literature on Conqueror Duplicators.

☐ I would like to have a one week FREE trial of a Conqueror Spirit Duplicator.

Name .... Title ....

Name of Business ....

Address ....

City .... Zone ..... State ....

A SUPPLEMENT
TO YOUR PRESENT
SALARY ?

Coin-Operated
Norge Equipped
Self-Service

*An Income
When You
Retire ?*

Launderamas . . .

the ideal, low-investment, high-return, "second business" for the man who wants the extra security of an additional income.

For many years these fully automatic, coin-operated, self-service laundry stores have received community-wide acceptance and have proven highly profitable. Launderamas feature the best equipment available at the lowest financing terms in the industry—as low as 10% down with the balance financed at 6% over a three year period.

Launderamas are self-amortizing and conducive to chain operation. Because they are fully automatic, they demand little of your time. Because there are no salaries or franchise fees, the cost of operation is extremely low, and you are able to offer your customers a 40% to 60% savings on their laundry needs.

The sole purpose of our national organization is to assist and guide you in developing your own coin-operated laundry store operation. Our staff is made up of independent associates who are able to offer you the benefit of their years of experience in this tried and proven successful field.

For complete information and name of nearest office, call or write—

Dept. D **Zeolux Corp.**
261 Madison Ave., New York 16, N.Y. YUkon 6-9740
IN CANADA: Moffats Ltd., Weston, Ontario, Canada
Phone: Cherry 1-2611

BLACK
MAGIC
in
M/PR
CARBON RIBBON

**The Finest
Carbon Ribbons for Executive
Correspondence and Duplicating**

NEW MAGIC! Distinctive, beautiful, executive correspondence, reflecting your prestige and that of your business. Old Town's M/PR Ribbons give your typing sharp, uniform-black, opaque beauty.

Exceptional results are *yours* because of M/PR's thin, no break, no-tear, extra long *MYLAR plastic film inked with an exclusive Old Town formula. M/PR Ribbons are unexcelled for distinctive correspondence, original copy on masters for offset reproduction and on Xerox copy; for copying work on all wet or dry copying equipment. There's an M/PR Ribbon for every type of machine with a carbon ribbon feeding attachment.

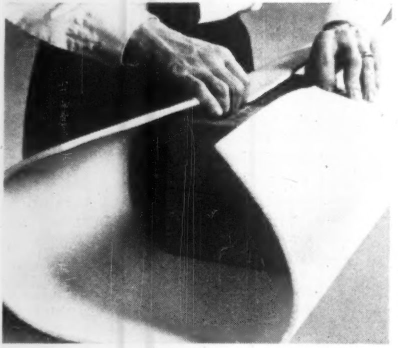
Order Old Town M/PR Ribbons from your stationer, or write to us your requirements. *Reg. T. M. E. I. DuPont Co.

Old Town
OLD TOWN
CORPORATION
Established 1917
750 Pacific Street • Brooklyn 38, N. Y.

New Product Parade

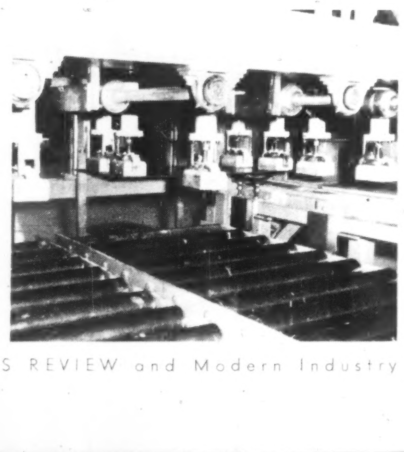
INSTANT PIPE: Concrete pipe is manufactured in the ditch with this new process. A double-hoppered forming machine feeds concrete around inflatable rubber-and-fabric forms made by Goodyear Aircraft Corp. Six hundred feet of pipe can be laid without interruption at speeds to 12 feet per minute. *Fullerform Continuous Pipe Corp., Phoenix, Ariz.*

ULTRASONIC WELDER: Metal sheets now can be welded with high frequency sound. Oxidized surfaces can be welded without preparation, and the danger of electrical conductivity is eliminated. The heatless, rotary-tip welder is suitable for cold-sealing operations. *"Glennite Rotary Welder," Gulton Industries, Inc., 212 Durham Ave., Metuchen, N.J.*



PADDED PACKAGES: This package cushioning material is said to offer unusually high energy absorption per dollar of cost. The lightweight plastic, which can be die-cut to desired shapes, acts as an insulation against extremely low temperatures. It is available in thicknesses from 1/16 to 20 inches. *"Resilo-Pak," Armstrong Cork Company, Lancaster, Pa.*

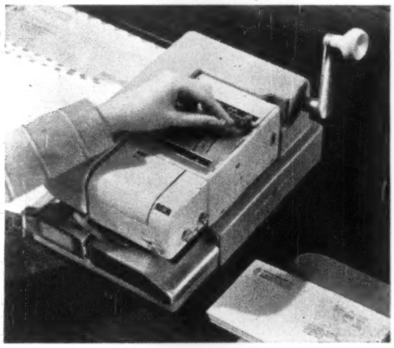
MAGNETIC MOVE: Cold rolled steel sheets are moved through an automated assembly line by magnets instead of vacuum-lifting or manual methods. Lifting magnets pick the sheets off a stack and pass them to another set of magnets, where they are passed to a magnet-equipped conveyer line for processing. *Eriez Manufacturing Company, Erie 6, Pa.*



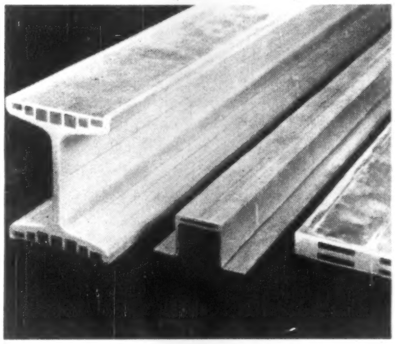
» **THIS MONTH:** *Economical mailing machine; easing metal fatigue; moving materials faster and more safely; compact motors with printed circuits.*

POSTAGE PRINTER: An economical desk-top postage meter machine seals, stamps, and stacks up to 40 letters. Designed for small mailers, it offers the same advantages found in larger models, such as a printing area for the mailer's own advertising. It will sell for about one-third less than comparable models. *"Model 5500," Pitney-Bowes, Inc., Stamford, Conn.*

VIBRATION CONTROL: Material fatigue resulting from vibration can be cut by building damping characteristics into structural members, instead of isolating the members from the vibration source. The new method employs laminated and cellular construction with an elastic damping medium inserted into the members. *Barry Controls, Inc., Watertown, Mass.*



REMOTE CONTROL: The remote control device on this tractor frees a driver for other work. One man can select orders, load, move the tractor from a distance, and load again, saving time and steps. Average increases of 19.1 per cent in hourly production have been shown. *"Radox," Barrett-Cravens Company, 628 Dundee Road, Northbrook, Ill.*



POCKET-SIZE COMMUNICATIONS: A wireless paging system employs miniaturized receivers weighing only eight ounces. Each unit is tuned to a central control point. According to the manufacturer, the system can be used in any type of building—there are no "dead" spots. *"Electropage," United States Communications, Inc., 20 Madison Ave., Hicksville, N.Y.*

SPACE UNLIMITED
For your Records

STAXONSTEEL FILE

NO SHELVING NEEDED!
STAXONSTEEL employs an engineering principle to combine the strength of steel with the economy of corrugated board. The steel supporting frame gives the drawer equal support front, back and sides. For long term economy there is no better record storage drawer than STAXONSTEEL. Five standard stock sizes available.

FREE Catalog and Record Storage Manual.
Write Dept. DR3.

BANKERS BOX PRODUCTS
BANKERS BOX COMPANY
Record Storage Specialists Since 1918
2607 N. 25th Ave., Franklin Park, Ill.

MODERN INDUSTRY BOOKS

How to Make and Use
Charts—*Effectively*

A practical guide to the use of modern graphic methods in business. Reduces the theory and practice of presenting facts in visual form to their simplest elements. It gives you direct, detailed, and thorough understanding of the *why* as well as the *how* of each step of the graphic method.

GRAPHIC PRESENTATION SIMPLIFIED
by R. R. LUTZ

For ten years, R. R. Lutz was General Statistician to the National Industrial Conference Board

256 pages 6¼ x 9¼, $5.

A MODERN INDUSTRY BOOK

It shows you how to make all kinds of graphic charts . . . how to use them . . . how to analyze a problem, select the equipment, and execute the graph or graphs best suited to the problem.
Dozens of illustrations point up the text.

Order from Book Department
Dun's Review and Modern Industry,
99 Church Street, New York 8, N.Y.

SPEED

that's what you want in active record handling —

SPEED for faster service . . . SPEED for more output per dollar invested . . . SPEED to maintain work flow of entire record handling and data processing operations.

and with Rol•Dex you get SPEED!

because with ROL • DEX record housing equipment

all records are immediately available — records roll to the clerk (seated, of course) — she has thousands visible at her fingertips — no waiting for hidden, motor-driven racks to come into place. And random reference is no problem. **Provides better control, too,** because Rol-Dex equipment can be organized into work centers that include machines and all tools needed for fast operation.

find out about all the other advantages of Rol-Dex equipment. It's built to fit your system, your form size, your volume, your space, your expansion plans.

Rol-Dex Division

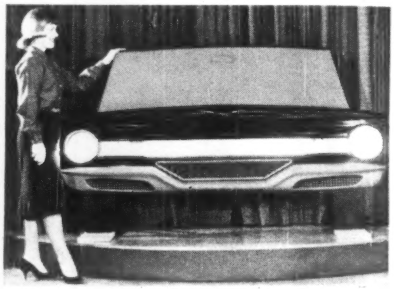
ROL·DEX

pat. and pats. pending

WATSON MANUFACTURING COMPANY, Inc.
Jamestown, New York

WATSON MANUFACTURING COMPANY, INC.
Rol-Dex Division, Dept. D-1, Jamestown, New York
☐ Please send literature.
☐ Have consultant call me for appointment .... (phone)
Name .... Title ....
Firm ....
Street ....
City .... State ....

POWERFUL FLUORESCENT: A new fluorescent lighting system is said to be 338 per cent more powerful than any unit on the market. An optically-controlled fixture directs an intense beam of light with a minimum amount of glare. Besides applications as lighting for buildings and highways, the manufacturer suggests using the unit as a single panel automobile headlight. *"Controlled Powerbeam System," Sylvania Electric Products, Inc., 730 3rd Ave., New York 17.*



❖

FOAM SPRINKLERS: A new automatic fire protection system uses foam as well as water. Heat-sensing devices activate a sprinkler system to cover an area with a blanket of foam. The foam snuffs out flame by cutting off the oxygen supply, and at the same time protects material by isolating it from the flame. A water spray keeps the material cool. *"Automatic" Sprinkler Corporation of America, Youngstown, Ohio.*

❖

PRINTED ARMATURE: A printed circuit replaces the conventional wire-wound armature on two new motors. The light weight of the rotating part permits the motors to reach full speed within a few thousandths of a second. Smooth torque at extremely low speeds also permits direct drive applications. The small, pancake-shaped motors are expected to change the design of products ranging from business machines to home appliances. *Photocircuits Corp., 31 Sea Cliff Ave., Glen Cove, New York.*

❖

CLEAN FILES: A new file can be cleaned quickly and easily with a few twists at the handle. Turning a key in the file produces a shearing action which ejects accumulated filings from the teeth. *"Kwick Kleen," Gordon Associates, Inc., First St., Derby, Conn.*

—E.G.

Advertising Index

Acme Visible Records, Inc. 136
Cargill, Wilson & Acree, Inc.
Allied Research Products, Inc. 71
Emery Advertising Corporation
All-Steel Equipment, Inc. 22
Marsteller, Rickard, Gebhardt & Reed, Inc.
American Credit Indemnity Company 21
VanSant, Dugdale & Co., Inc.
American Metal Products 90
Roland G. Spedden Advertising Agency
American Motors 10
Geyer, Morey, Madden & Ballard, Inc.
American Warehousemen's Association 124
Bozell & Jacobs, Inc.
Armco Drainage & Metal Products, Inc. 123
N. W. Ayer & Son, Inc.
Automatic Electric Company 142
Kudner Agency, Inc.
Baltimore & Ohio Railroad 102
The Richard A. Foley Advertising Agency, Inc.
Bankers Box Company 161
Frank C. Jacobi Advertising, Inc.
Big Joe Manufacturing Co. 23
Raymond Wiggers
Blonder-Tongue Laboratories 108
Jack Gilbert Associates
Borroughs Manufacturing Company, Subsidiary, American Metal Products Company 24
Roland G. Spedden Advertising Agency
Burns, William J., Detective Agency, Inc., The 106
Fletcher Richards, Calkins & Holden, Inc.
Burroughs Corporation 65
Campbell-Ewald Company
Butler Manufacturing Company 66
Aubrey, Finlay, Marley & Hodgson, Inc.
Cambridge Wire & Cloth 95
Emery Advertising Corp.
Campbell, H. F., Construction Co. 81
L. J. DuMahaut Advertising Agency
Chase Manhattan Bank, The 28-29
Albert Frank-Guenther Law, Inc.
Chesapeake & Ohio Railway 116
Meldrum & Fewsmith, Inc.
Chicago & North Western Railway 96
The Caples Company
Cidair Structures Company 128
Cincinnati Gas & Electric Company, The 67
Stockton West Burkhart, Inc.
Clark Equipment Company 87
Marsteller, Rickard, Gebhardt & Reed, Inc.
Cole Steel Equipment Co. 36
Daniel & Charles, Inc.
Colorado, Department of Development 126
William Kosta and Associates, Inc.
Colson Corp., The 34
Rothbardt & Haas Advertising, Inc.
Columbus McKinnon Chain Corporation (Conveyor Division) 104
Comstock & Company
Commercial Credit Corporation 2
VanSant Dugdale & Co., Inc.
Convoy, Inc. 154
Rex Farrall, Inc.
Copease Corporation 7
Gould & Tierney, Inc.
Cuckler Steel Span Co. 92
Warren & Litzenberger, Advertising
Davey Tree Expert Company 104
Meldrum & Fewsmith, Inc.
Dayton Power & Light Co., The 107
Hugo Wagenseil & Associates Co.
DeJUR-Amsco Corp. 26-27
Adams & Keyes, Inc.
Detroit Edison Company, The 74
Campbell-Ewald Company
Ditto, Inc. 149
Fulton, Morrissey Company
Dodge, F. W., Corp. 138
G. M. Basford Company
Duo-Fast 101
Robertson, Buckley & Gotsch, Inc.
Ebasco Services Inc. 75
Albert Frank-Guenther Law, Inc.
Executone, Inc. 135
G. M. Basford Company
Fastener Corporation 101
Robertson, Buckley & Gotsch, Inc.
Ford Motor Company 18
J. Walter Thompson Company
Friden, Inc. 8
Richard N. Meltzer Advertising, Inc.
General Aniline & Film Corp. 6
Benton & Bowles, Inc.
Georgia Power Company 93
Lowe & Stevens Advertising
Graphic Systems 134
Diener & Dorskind, Inc.
Hartar Corporation 35
The Jaqua Company
Hertz Systems, Inc. 139
Needham, Louis and Brorby, Inc.
Hever Inc. 159
The Biddle Company
Hill, R. O. H., Inc. 154
Ungar & Fruhling
H-O-N Company, The 148
Clem T. Hanson Co.
Ideal Cement Company 88
Rippey, Henderson, Bucknum & Co.
Illinois Central Railroad 128
The Caples Company
Indiana Department of Commerce & Public Relations 61
Mark Gross and Associates
Iselin, William, Co., Inc. 14-15
Briggs & Varley, Inc.
Kelley Company, The 108
Maercklein Advertising
Kinnear Manufacturing Co. 120
Wheeler, Kight & Gainey, Inc.
Kleinschmidt Division of Smith-Corona Marchant, Inc. 151
Alex T. Franz, Inc.
Lefebure Corp. 144
Warren & Litzenberger
Lite-Line Metal Industries, Division of Copperloy Corp. 62
Louden Machinery Co. 105
Kirkgasser-Drew Advertising
Magline, Inc. 98, 129
Rossi and Company
Mahon, R. C., Company, The 121
Anderson, Inc.
Mahoney-Troast Construction Co. 126
Wehner Advertising Agency
Manifold Supplies Co. 164
Faulkner Advertising, Inc.
Marsh & McLennan, Inc. 122
Doremus & Company
Mathews Conveyer Co. 91
Meek and Thomas, Inc.
McClure Projectors, Inc. 147
Frank C. Nasher, Inc.
Metropolitan Oakland Area 119
Reinhardt Advertising, Inc.
Micromatic Hone Corporation 68-69
Gray & Kilgore, Inc.
Milwaukee Stamping Company 115
Irving J. Rosenbloom Advertising Agency
Minnesota Mining & Manufacturing Company 153
Erwin Wasey, Ruthrauff & Ryan, Inc.
Minnesota, State of, Dept. of Business Development 108
Bozell & Jacobs, Inc.
Moore Business Forms 132
N. W. Ayer & Son, Inc.
National Machine Products Co. 86
Hyatt Eby
National Truck Leasing System 59
W. S. Kirkland
National Vulcanized Fibre Co. 72
Harris D. McKinney, Inc.
New York State Dept. of Commerce 110
Batten, Barton, Durstine & Osborn, Inc.
Niagara Mohawk Power Corp. 70
Batten, Barston, Durstine & Osborn, Inc.
Nordson Corp. 148
Super-Vision, Inc.
Office Products, Inc. 134
Sales & Merchandising Counsellors
Old Town Corporation 160
LaPorte & Austin, Inc.
Palmer-Shile Company 127
Alfred B. Caldwell, Inc.
Pennsylvania, Commonwealth of 57
Backman, Kelly & Trautman, Inc.
Philco Corporation, Government & Industrial Division 32
Maxwell Associates, Inc.
Pitney-Bowes, Inc. 9
L. E. McGivena & Co., Inc.
Planet Corp. 94
Jepson-Murray Advertising
Prime-Mover Co., The 124
Clem T. Hanson Co.
Raymond Corporation, The 63
Taylor M. Ward, Inc.
Recordak Corporation, Subsidiary of Eastman Kodak Company 33
J. Walter Thompson Company
Revolvator Company, The 117
Fredricks & Company, Inc.
Richards-Wilcox Mfg. Co. 73
Connor Associates, Inc.
Rock Island Lines 84
Aubrey, Finlay, Marley & Hodgson, Inc.
Ryder System, Inc. 12-13
McCann-Marschalk Company
Ryerson, Joseph T., & Son, Inc. 4
The Buchen Company
Santa Fe Railway 76
Leo Burnett Company, Inc.
Seaboard Airline Railroad 80
The Caples Company
Seeburg Corp., The 17
The Buchen Company
Shaw-Walker Company 136
J. Walter Thompson Company
Slater Food Service Management 97
The Richard A. Foley Advertising Agency, Incorporated
Southern New Jersey Development Council 124
The Cowan Advertising Agency
Stenocord of America, Inc. 145
L. D. Zetlin & Company, Inc.
Stran-Steel Corporation, Div. of National Steel Corp. 99
Campbell-Ewald Company
Stromberg, Division of General Time Corporation 109
G. F. Sweet Co., Inc.
Studebaker-Packard Corporation 141
D'Arcy Advertising Company
Technical Service, Inc. 16
Parker Holden
Tel-A-Story, Inc. 164
Warren & Litzenberger
Texaco, Inc. .... Cover IV
G. M. Basford Company
Toledo Scale 146
Beeson-Reichert, Inc.
Travelers Insurance Co., The 156
Young & Rubicam, Inc.
Typhoon Air Conditioning Division 103
The Zlowe Company, Inc.
Union Electric Company 100
Gardner Advertising Company
Union Pacific Railroad 64
The Caples Company
United Air Lines 118
N. W. Ayer & Son, Inc.
United Food Management Service 114
Carr Liggett Advertising, Inc.
United States Communications, Inc. 125
Vogel-Fox Advertising, Inc.
United States Envelope Co. 140
Wm. B. Remington, Inc.
United States Steel Corporation 30–31
Batten, Barton, Durstine & Osborn, Inc.
Universal Business Machines, Inc. 146
E. J. Presser and Co.
Vantage Press 164
Murray Leff & Co.
Vendo Company, The 113
Potts Woodbury, Inc.
Virginia Department of Conservation and Economic Development 131
Houck and Company, Inc.
VISIrecord, Inc. 20
McClellan Advertising, Inc.
Wagner Electric Corporation 154
Arthur R. Mogge, Inc.
Watson Manufacturing Co., Inc. 162
Griffith & Rowland
Weber Marking Systems 25
Stoetzel & Associates, Inc.
Wells, John H., and Associates 164
West Chemical Products, Inc. 62, 98, 126
G. M. Basford Company
Western Electric Co. .... Cover III
Cunningham & Walsh, Inc.
Western Pacific Railroad 112
Honig-Cooper, Harrington & Miner
Western Union Telegraph Co., The 82–83
Benton & Bowles, Inc.
West Penn Power 89
Fuller, Smith & Ross, Inc.
West Virginia Industrial & Publicity Commission 98
Advertising, Inc.
Wolverine Tube, Division of Calumet & Hecla, Inc. .... Cover II
Gray & Kilgore, Inc.
Yoder Company, The 60
G. M. Basford Company
Zeolux Corp. 160
De Perri Advertising, Inc.

Other DUN & BRADSTREET *publications:*

MILLION DOLLAR DIRECTORY

METALWORKING DIRECTORY

INTERNATIONAL TRADE REVIEW

ADVERTISING SALES STAFF

EAST:

New York 8, 99 Church St., DIgby 9-3300 .... George Maturniak, Jack Phillips, Bert Berne, Tom Navin
Philadelphia 2, 3 Penn Center Plaza, LOcust 8-3500 .... Alvah B. Wheeler
Atlanta 8, 1722 Rhodes-Haverty Bldg., JAckson 2-8113 .... Morgan Pirnie, Harold Brown, Gus Krimsier

WEST: John Krom, Western Sales Manager

Chicago 6, 300 W. Adams St. RAndolph 6-8340 .... John Krom, Ralph O. McGraw
Cleveland 13, 635 Terminal Tower, TOwer 1-3520 .... Harry O. Andrews
Detroit 26, 1100 Cadillac Tower, WOodward 1-3764 .... Carl Neppach, Jr.
Los Angeles 14, 610 S. Main St. MAdison 2-2141 .... Walter Huckins

Panama-Beaver
Carbon papers
Inked ribbons
Unimasters
Coast to Coast Distribution
MANIFOLD SUPPLIES CO.
Brooklyn, New York

WHAT KIND OF VISUAL SALES JOB DO YOU HAVE IN MIND?

We have automatic projectors for point of sale and trade shows. We have desk top viewers for both slides and film strips — with or without sound, designed with your salesmen in mind.

For information, write Dept. D-3
TEL-A-STORY, INC., Davenport, Iowa

Looking for a PUBLISHER?

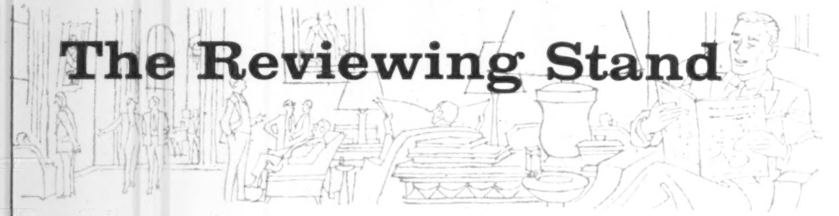
Your book can be published, promoted, distributed by successful, reliable company noted for prompt, personal service. All subjects. Free Editorial Report. Inquiries also invited from businesses, organizations, churches, etc. Send for Free Booklet. Vantage Press, Dept. DR, 120 W. 31, New York 1.

MINIATURE SCALE MODELS
of office, factory and apartment buildings, accurately detailed interior and exteriors.
Models for Interior Decorators and Museums. Diorama Displays for Advertising and Public Relations Promotions.
Illustrated literature available
JOHN H. WELLS & ASSOCIATES
75 East Wacker Drive • Chicago 1, Illinois—DE 2-6033

Have You a New Address?

An early notice of change of address is helpful—it is usually necessary to have three weeks' notice. Please include the old address and your postal zone number and send the information to the Circulation Department.

DUN'S REVIEW and Modern Industry,
99 Church St., New York 8, N.Y.



The Reviewing Stand

The Authority Poacher

During a recent discussion among a group of high-level executives, this question was raised: How much authority should middle management have? The answer, the men decided after considerable debate, was: "All it can take."

The consensus was that the middle manager of promise is a "poacher" not only on the preserves of the more lethargic department heads but also on any marginal or unclaimed areas of decision which are being neglected or ignored.

Top management welcomes the aggressor in middle management if his initiative includes understanding of company objectives and enthusiasm for the people around him and if he invites a little more credit than blame for his aggressive tactics.

Top management often has no means of measuring the worth of a subordinate except by observing the persistent inching and pushing of the man who tests all the fences and occasionally jumps over them when the opportunity presents itself.

Many a president has remarked, "That fellow acts like he's after my job." One thing is sure. The authority poacher is watched and either promoted or fired without much delay.

Tale of the Spider

There is an ancient fable about the philosopher who sealed twelve young spiders in a jar. He fed them only one fly a day, leaving them weak and frantic for food.

One of the twelve spiders proved more agile than the rest, and he succeeded in getting the largest share of the food ration. As a result, he waxed strong and despotic while the other eleven were feeble and resentful.

However, just when the big spider had achieved a glorious self-sufficiency, the weaker eleven ganged up on him and devoured him. The process continued, as first one spider and then another gained power and then disappeared—ten, nine, eight, seven, six—until the philosopher grew weary of proving the obvious.

A similar fate usually befalls any nation, group, or individual which assumes despotic power. There may be a lesson here, too, for giant industry and labor, whose benevolent impulses and social responsibilities are sometimes forgotten in the fight for power.

In Ignorance Is Hope

The road to the future is never a straight line. In fact, the future abhors Euclidean geometry and Arabian mathematics, and the arrow toward the obvious never hits the target. Astigmatism is an aid to the competitive spirit of man, because it prevents him from believing in the dark portents he sees.

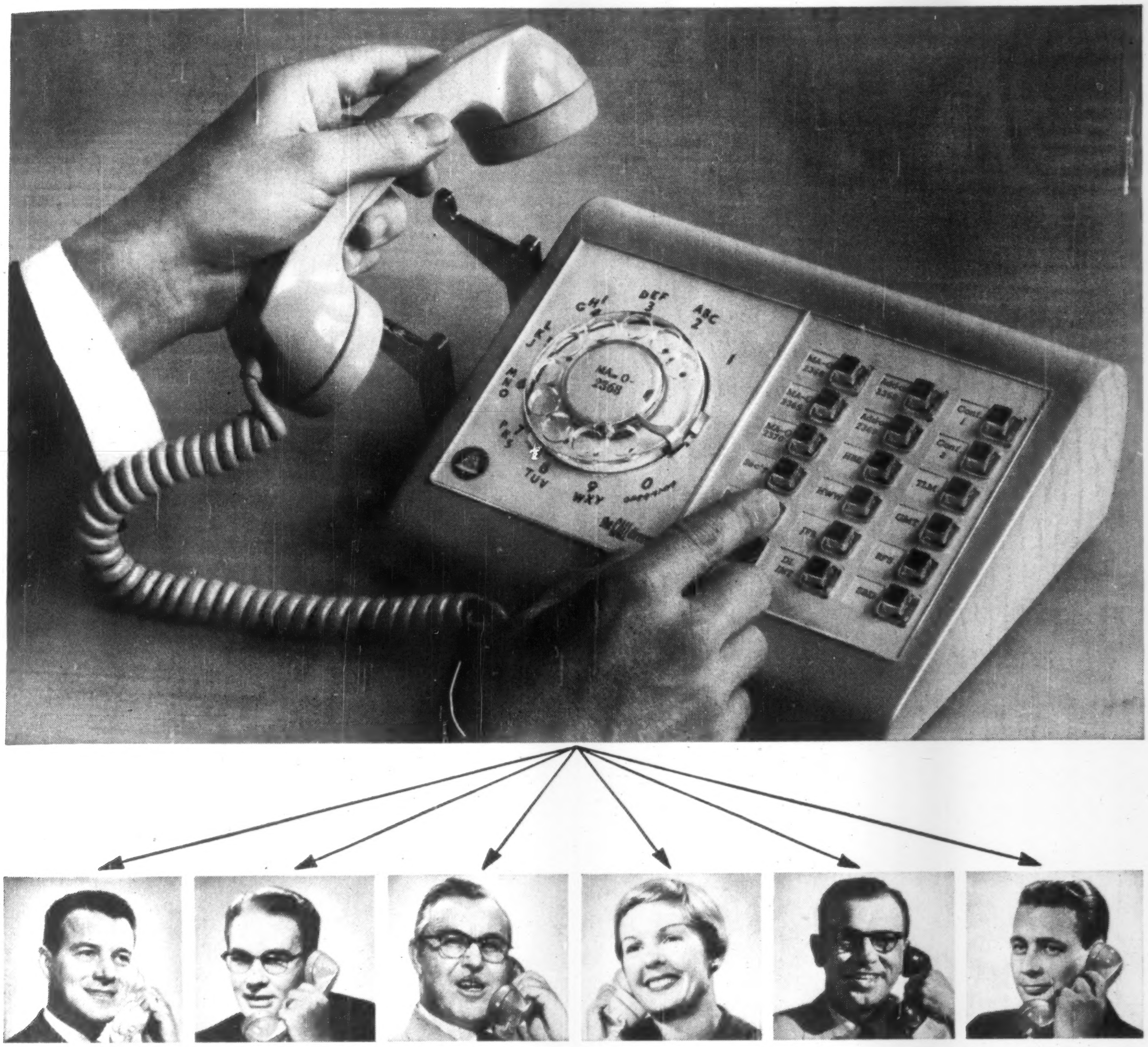
Every generation has had its melancholy soothsayers talking of "the dark future," and although there are always difficulties in increasing complexities, the road block of our immediate vision disappears and other vistas arise to tempt and taunt the pilgrim.

The Ultimate Goals

Business is an accessory to the art of living, not the primary function of life. The proprietor or manager should take care that in his education and in planning and action during his working life that his business career is held in proper perspective to ultimate values, which are esthetic and spiritual. A life dictated by secular standards adds up to zero in total assets, leaving a painful vacuum that material resources can never offset.

—A.M.S.

New Call Director set made by Western Electric



Gives you push button telephone convenience

Here's the handiest telephone ever offered to the executive who makes—or the secretary who takes—a lot of calls. Being able to get *many* frequently-called office numbers by pushing a button . . . like an intercom . . . is just one of the conveniences possible.

To begin with, the Call Director telephone has plenty of push-buttons. How they're used depends on your specific needs. But there are enough to permit many incoming lines . . . enough to let you hold several calls while answering another. One model has a capacity of 18 buttons . . . another, with 30 buttons, lets a secretary handle up to 29 office telephones.

The compact, space saving Call Director set offers many special features all controlled by a single instrument on your desk. By simply pushing a button you can:

- Set up inter-office conference calls.
- Connect an incoming call to another office extension.
- "Add on" other extensions to incoming calls for conferences.
- "Camp-on" a busy extension so your call goes through automatically when it's free.

All these conveniences can be combined in this flexible new telephone.

The Call Director telephone is made by Western Electric for your Bell telephone company along with many other telephone products needed to help provide service—our main job as manufacturing and supply unit of the Bell System.

Western Electric

MANUFACTURING AND SUPPLY UNIT OF THE BELL SYSTEM